

**BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA  
COLUMBIA, SOUTH CAROLINA**

**HEARING #16-11554                      OCTOBER 13, 2016                      10:30 A.M.**

**DOCKET NO. 2016-223-E:**

*SOUTH CAROLINA ELECTRIC & GAS COMPANY – Petition of South Carolina Electric & Gas Company for Updates and Revisions to Schedules Related to the Construction of a Nuclear Base Load Generation Facility at Jenkinsville, South Carolina*

**TRANSCRIPT OF TESTIMONY  
AND PROCEEDINGS**

**VOLUME 4 OF 4**

**HEARING BEFORE:** Swain E. WHITFIELD, CHAIRMAN; Comer H. ‘Randy’ RANDALL, VICE CHAIRMAN; and COMMISSIONERS John E. ‘Butch’ HOWARD, Elliott F. ELAM, Jr., Elizabeth B. ‘Lib’ FLEMING, Nikiya M. ‘Nikki’ HALL, and G. O’Neal HAMILTON

ADVISOR TO COMMISSION:                      F. David Butler, Esq.  
Senior Counsel

**STAFF:** Joseph Melchers, General Counsel; James Spearman, Ph.D., Executive Assistant to Commissioners; Philip Riley, Doug Pratt, Lynn Ballentine, and Tom Ellison, Advisory Staff; Jo Elizabeth M. Wheat, CVR-CM/M-GNSC, Court Reporter; and Deborah Easterling and Calvin Woods, Hearing Room Assistants

**APPEARANCES :**

**K. CHAD BURGESS, ESQUIRE, MATTHEW W.  
GISSENDANNER, ESQUIRE, MITCHELL WILLOUGHBY,  
ESQUIRE, and BELTON T. ZEIGLER, ESQUIRE,**  
representing SOUTH CAROLINA ELECTRIC & GAS COMPANY,  
PETITIONER

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***PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA***

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**APPEARANCES (Cont'g) :**

***SCOTT ELLIOTT, ESQUIRE,*** representing SOUTH CAROLINA ENERGY USERS COMMITTEE, INTERVENOR

***ROBERT GUILD, ESQUIRE,*** representing SIERRA CLUB, INTERVENOR

***FRANK R. ELLERBE, III, ESQUIRE,*** and ***JOHN H. TIENCKEN, JR., ESQUIRE,*** representing CENTRAL ELECTRIC POWER COOPERATIVE and THE ELECTRIC COOPERATIVES OF SOUTH CAROLINA, INTERVENORS

***J. BLANDING HOLMAN, IV, ESQUIRE,*** and ***GUDRUN THOMPSON, ESQUIRE,*** representing SOUTH CAROLINA COASTAL CONSERVATION LEAGUE, INTERVENOR

***SANDRA WRIGHT,*** appearing *pro se*, INTERVENOR

***JEFFREY M. NELSON, ESQUIRE, and SHANNON BOWYER HUDSON, ESQUIRE,*** representing the SOUTH CAROLINA OFFICE OF REGULATORY STAFF

1            guess, holding your hand or whatever you want to  
2            call it.

3            **MS. THOMPSON:** Thank you, Mr. Chairman.

4            **CHAIRMAN WHITFIELD:** And he's already said it  
5            should probably be the other way around –

6            [Laughter]

7            – but we will excuse him, and we'll leave you  
8            the sole one representing your client the rest of  
9            the time.

10           **MS. THOMPSON:** Thank you, Mr. Chairman.

11           **MR. ELLIOTT:** Thank you, Mr. Chairman.

12           **CHAIRMAN WHITFIELD:** I'm going to now turn it  
13           over to ORS.

14           **MR. NELSON:** Thank you, Mr. Chairman. I think  
15           we're down to our last witness, and ORS would call  
16           Mr. Gary Jones to the stand.

17           **CHAIRMAN WHITFIELD:** Mr. Jones, come forward.

18           [Witness affirmed]

19           THEREUPON came,

20           **G A R Y   C .   J O N E S ,**

21           called as a witness on behalf of the South Carolina Office of  
22           Regulatory Staff, who, having been first duly affirmed, was  
23           examined and testified as follows:

24           <

25           <

**DIRECT EXAMINATION**

**BY MR. NELSON:**

**Q**     Mr. Jones, would you please give your full name, business address, and occupation, for the Commission?

**A**     My full name is Gary Conrad Jones. I'm the president of Jones Partners, Limited, a private electrical power industry consulting engineering firm. My address is 1555 North Astor – A-s-t-o-r – Street, Apartment 22W, Chicago, Illinois 60610.

**Q**     Mr. Jones, could you please provide us with a brief overview of your professional qualifications and experience?

**A**     Yes. Thank you.

          Mr. Chairman and Commissioners, I have over 45 years of experience with nuclear power plant design, construction, and operations support. I was with Sargent & Lundy, an international architect, engineering, and consulting firm in the electric power industry. I was there for 32 years, with 16 years as a senior vice president and owner of the firm. During that time, I led engineering design, construction support, and startup support for six new nuclear power plants and have led teams providing engineering design and consulting services for over 50 power plants in the United States and internationally.



1            After my retirement from Sargent Lundy, I served  
2            for two and a half years as a senior engineering safety  
3            officer at the International Atomic Energy Agency in  
4            Vienna, Austria. Since that time, I have been a private  
5            consultant and have worked with ORS on the VCS 2 and 3  
6            Plants since August 2011.

7            I am a registered Professional Engineer in the  
8            States of Missouri and South Carolina.

9            Thank you.

10        **Q**    Thank you, Mr. Jones. Did you prepare a complete  
11            curriculum vitae, which was attached as Exhibit GCJ-1 to  
12            your prefiled testimony?

13        **A**    Yes, sir, I did.

14        **Q**    And do you have any changes or corrections to that  
15            exhibit?

16        **A**    Yes, I do. There is one correction to the address that  
17            is provided there, and I have provided you with my new  
18            address in my opening testimony there. That's the only  
19            change.

20            **MR. NELSON:** Thank you, Mr. Jones.

21            If the Commission would request or require  
22            copies of these, I can provide them at this time;  
23            if not, we can file it afterwards. Again, the only  
24            change is the address of Mr. Jones. I'd be happy  
25            just to file it with the Court afterwards.

1                    **CHAIRMAN WHITFIELD:** Later is fine, Mr.  
2 Nelson. Later is fine.

3                    **MR. NELSON:** Thank you, Mr. Chairman. We  
4 would also, then, offer Exhibit GCJ-1 attached to  
5 the prefiled direct testimony of Mr. Gary Jones, as  
6 revised from the witness stand, into the record as  
7 the next hearing exhibit.

8                    **CHAIRMAN WHITFIELD:** Mr. Jones' prefiled  
9 direct testimony will be entered into the record as  
10 Hearing Exhibit No. 14 – I'm sorry, his Exhibit  
11 GCJ-1.

12                                [WHEREUPON, Hearing Exhibit No. 14 was  
13 marked and received in evidence.]

14                    **MR. NELSON:** Thank you, Mr. Chairman.  
15 We would also ask that the Commission qualify  
16 Mr. Jones as an expert in the areas of nuclear  
17 design, engineering, and construction, based on his  
18 education, over 45 years' experience in the nuclear  
19 power industry, and as shown on his curriculum  
20 vitae, which is now part of the record in this  
21 case. We would ask he be qualified as an expert by  
22 the Commission.

23                    **CHAIRMAN WHITFIELD:** So ordered.

24                    **MR. NELSON:** Thank you.

25 <

1     **BY MR. NELSON:**

2     **Q**     Mr. Jones, did you also prepare 34 pages of direct  
3             testimony that was prefiled in this docket on September  
4             1st of this year?

5     **A**     Yes, I did.

6     **Q**     Do you have any edits or corrections to your prefiled  
7             direct testimony?

8     **A**     One minor editorial: the pagination in the testimony is  
9             incorrect. It should be 34 pages, instead of 33.

10            **MR. NELSON:** And, again, I would ask, with the  
11            Commission's approval, that we just file revised  
12            direct testimony with those page numbers. Nothing  
13            else is different, other than just the page numbers  
14            were mis-numbered.

15            **CHAIRMAN WHITFIELD:** If you could file that  
16            immediately upon the end of this case.

17            **MR. NELSON:** Thank you, Mr. Chairman.

18            Mr. Chairman, we also ask that Mr. Jones'  
19            prefiled direct testimony be entered into the  
20            record as if given orally from the stand.

21            **CHAIRMAN WHITFIELD:** Mr. Jones' direct  
22            testimony will be entered into the record as if  
23            given orally from the stand.

24                    [See pgs 897-931]

25            **MR. NELSON:** Thank you, Mr. Chairman.

1     **BY MR. NELSON:**

2     **Q**     Mr. Jones, have you prepared a summary of your direct  
3             testimony for this hearing?

4     **A**     Yes, I did.

5     **Q**     Would you please present that to the Commission.

6     **A**     Yes, of course.

7             The purpose of my direct testimony is to provide an  
8             overview of ORS's findings regarding the Petition. I  
9             provided a summary of the construction status of VCS 2  
10            and 3, an overview of the EPC contract changes, and an  
11            assessment of each of the cost elements of SCE&G's  
12            Petition. It is important to note that, while ORS's  
13            review included an itemized assessment, cost must be  
14            considered in the overall context of SCE&G's sensitivity  
15            analysis and the settlement agreement.

16            The major points of this assessment include: the  
17            support for the \$505 million premium associated with the  
18            EPC contract option, in the context of the larger  
19            settlement agreement; also, support for the \$137.5  
20            million increase associated with the October 2015  
21            contract amendment, also in the context of the larger  
22            settlement; also included is an analysis of the cost of  
23            each change order, along with the assessment of its  
24            status; also included was support of the \$20.8 million  
25            in owner's costs, which were well-documented and

1        reasonable; and, lastly, an assessment of other items,  
2        including the Petition, some of the minor items in the  
3        Petition. I also included an assessment of the proposed  
4        modification to the construction schedule, which  
5        includes revised guaranteed substantial completion dates  
6        of August 31, 2019, for Unit 2, and August 31, 2020, for  
7        Unit 3, and the revised associated BLRA milestone  
8        schedule. My assessment indicated that these revised  
9        dates were justified, but cautions that uncertainty in  
10       this area remains, particularly in the granular details  
11       of the schedule, as the resource-loaded integrated  
12       schedule currently being prepared by Fluor may have a  
13       significant impact on these dates. Finally, I reviewed  
14       Dr. Lynch's sensitivity analysis and found his analysis  
15       to be supportive of SCE&G's decision to accept the EPC  
16       option, providing sufficient protection was provided to  
17       the South Carolina ratepayers.

18                This concludes the summary of my testimony.

19                **MR. NELSON:** Thank you, Mr. Jones.

20  
21  
22  
23        [PURSUANT TO PREVIOUS INSTRUCTION, THE  
24        PREFILED DIRECT TESTIMONY {W/CORRECTIONS} OF  
25        GARY C. JONES FOLLOWS AT PGS 897-931]

**THE OFFICE OF REGULATORY STAFF**

**DIRECT TESTIMONY & EXHIBIT**

**OF**

**GARY C. JONES**

**SEPTEMBER 1, 2016**



**DOCKET NO. 2016-223-E**

**Petition of South Carolina Electric & Gas Company for  
Updates and Revisions to Schedules Related to the  
Construction of a Nuclear Base Load Generation  
Facility at Jenkinsville, South Carolina**

**DIRECT TESTIMONY & EXHIBIT OF****GARY C. JONES, P.E.****ON BEHALF OF****THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF****DOCKET NO. 2016-223-E**

**IN RE: PETITION OF SOUTH CAROLINA ELECTRIC & GAS COMPANY FOR  
UPDATES AND REVISIONS TO SCHEDULES RELATED TO THE CONSTRUCTION  
OF A NUCLEAR BASE LOAD GENERATION FACILITY AT JENKINSVILLE,  
SOUTH CAROLINA**

**Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

**A.** My name is Gary C. Jones, P.E. I am President of Jones Partners, Ltd., a private consulting engineering firm in the electrical power generation field. My business address is 1555 North Astor Street, Apt. 22W, Chicago, Illinois, 60610-5765.

**Q. WHAT IS THE NATURE OF YOUR BUSINESS?**

**A.** As a consultant, I provide professional engineering and consulting services to clients in the electric power industry.

**Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

**A.** I received a Bachelor of Science degree in Engineering Science from Tennessee Technological University in Cookeville, Tennessee, where I also participated in the Cooperative Education Program with two one-year assignments at the Oak Ridge National Laboratory in Oak Ridge, Tennessee. I worked for thirty-two years at Sargent & Lundy, LLC, ("S&L") an international architect-engineering and consulting engineering firm in the electric power industry based in Chicago, Illinois. I held engineering positions of increasing levels of responsibility working on the design, procurement, licensing,



1 construction support and start-up of nuclear power plant projects, culminating in the  
2 position as Senior Vice President and one of the owners of the firm for the last sixteen  
3 years of my tenure. I led the engineering activities associated with the design of six nuclear  
4 power plants at three nuclear power plant stations, including the LaSalle County and  
5 Braidwood plants for Commonwealth Edison (now Exelon) and the Marble Hill station for  
6 Public Service Indiana. I also led the engineering activities associated with the restarts of  
7 the LaSalle County Station Units 1 and 2 and the D.C. Cook Plant after these plants were  
8 shut down due to operation concerns. I served for two years as head of the Mechanical  
9 Department at S&L. I also led the engineering activities associated with services to  
10 numerous operating nuclear power plants, including modifications, technical and economic  
11 studies, licensing support, procedure and process development and other consulting  
12 services.

13 Among the most significant assignments on international projects were leading the  
14 design review of the first indigenous Chinese nuclear power plant, Qin Shan Unit 1, and  
15 participating as a senior member in the design review of the Korean nuclear power plants  
16 Yongggwang Units 3 and 4.

17 Upon my retirement from S&L, I established a private consulting practice, Jones  
18 Partners, Ltd., where I continued working in the nuclear power industry for two and a half  
19 years until I accepted a position at the International Atomic Energy Agency ("IAEA") in  
20 Vienna, Austria. There I was a Senior Engineering Safety Officer in the Engineering Safety  
21 Section of the Department of Nuclear Safety and Security. My assignments included  
22 developing international safety standards and performing safety reviews of nuclear power



1 plants. My most significant assignment was leading the safety review of the fifteen  
2 operating nuclear power plants in the Ukraine.

3 Following the completion of my assignment at the IAEA, I returned to private  
4 practice as a consultant to the power industry and continue that work today. I am a licensed  
5 professional engineer in the States of Missouri and South Carolina. Additional details of  
6 my work experience are provided in my resume which I have included as Exhibit GCJ-1.

7 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC SERVICE**  
8 **COMMISSION OF SOUTH CAROLINA (“COMMISSION” or “PSC”)?**

9 **A.** Yes. I provided written and oral testimony associated with Docket No. 2012-203-  
10 E to update the schedule and budget for the South Carolina Electric & Gas Company  
11 (“SCE&G” or the “Company”) construction of V.C. Summer Units 2 & 3 (“the Units” or  
12 “the Project”). I also presented at allowable ex parte briefings to update the Commission  
13 on the construction status of Units.

14 **Q. WHAT IS YOUR ASSIGNMENT FROM THE SOUTH CAROLINA OFFICE OF**  
15 **REGULATORY STAFF (“ORS”)?**

16 **A.** My assignment is to assist ORS in its monitoring and tracking of the construction  
17 schedule and budget related to SCE&G’s construction of the Units. I began my assignment  
18 with ORS in August 2011.

19 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

20 **A.** The purpose of my testimony is to provide on behalf of ORS a technical review of  
21 specific areas in SCE&G’s request for updates and revisions to its capital cost schedule  
22 and construction schedule for the Units as delineated in its petition before the PSC in  
23 Docket No. 2016-223-E (“Petition”). The specific areas which I will address are:

- 1 • The current construction status of the Project;
- 2 • The Engineering, Procurement and Construction Contract (“EPC Contract”) updated
- 3 capital cost schedule;
- 4 • The EPC option premium;
- 5 • The EPC amendment costs;
- 6 • The EPC Change Orders;
- 7 • The revised construction schedule provided by SCE&G in the update filing, which
- 8 includes the Base Load Review Act (“BLRA”) milestones;
- 9 • The Owners Cost changes; and
- 10 • The Sensitivity Analysis (Exhibit JML-1) of Mr. Lynch’s testimony.

11 To the extent that negotiations between ORS, the Company and other parties  
 12 result in a settlement, Allyn Powell will address the settlement and its impact on ORS’s  
 13 findings in her testimony.

14 **Q. PLEASE DESCRIBE THE CURRENT STATUS OF CONSTRUCTION.**

15 **A.** Overall, as of June 30, 2016, the Project is reported to be 22.4% complete based on  
 16 the total estimated direct construction labor man-hours. There has been significant progress  
 17 on the Project since this was reported in SCE&G’s Quarterly Report for the quarter ending  
 18 June 30, 2016. As of August 15, 2016, 123 of 167 Unit 2’s and 66 of 167 Unit 3’s Shield  
 19 Building panels have been fabricated at Newport News Industrial and shipped to the site.  
 20 The Unit 2 Main Steam and Feedwater piping penetration through the Shield Building has  
 21 been set in place and the large reinforced concrete panels that permanently support this  
 22 penetration assembly are nearing completion. In the Unit 2 Auxiliary Building, modules

1 CA05, CA03 and CA02 have been set inside the containment vessel. This means that all  
2 of the major Unit 2 structural modules (known as "Super Modules") have now been set in  
3 place. Preparations continue in support of installing the Unit 2 Reactor Pressure Vessel in  
4 the third quarter of 2016. Work continues to progress in the Unit 2 Annex Building,  
5 although still hampered by late identified design changes and shortages of materials.

6 In Unit 3, the large Turbine Building modules CH80 and CH82 have been set in the  
7 plant and work is well underway to set module CH 81 and the condensers. In the Auxiliary  
8 Building, CA20, Sub-assemblies 1 & 2 have now been set in place, completing setting of  
9 the entire CA20 module.

10 The Consortium (consisting of Westinghouse Electric Company ("WEC" or  
11 "Westinghouse") and Chicago Bridge & Iron ("CB&I")) has been restructured. Fluor  
12 Corporation ("Fluor") has been hired by Westinghouse as the sub-contracted construction  
13 manager for the Project. CB&I, which was previously in charge of construction, has exited  
14 the Consortium via Westinghouse's purchase of CB&I subsidiary Stone and Webster and  
15 SCE&G's release of CB&I.

16 In April 2016, Fluor assumed direct responsibility for craft labor on the Project after  
17 working with Westinghouse since January 2016. The evolution of this transition has been  
18 slower than anticipated, and as such the full impact of Fluor's process improvements has  
19 not yet been realized. However, there are significant process and procedural changes that  
20 are underway, which include implementing: more streamlined and effective construction  
21 work packages to expedite work in the field; changes in the procurement areas to better  
22 ensure that construction commodities are available when required and do not delay  
23 construction; changes in the welding programs to expand the qualification levels of the



welders, expedite the availability of welding commodities, and accelerate the welding production; and changes in the field engineering support to reduce turn-around time on design change requests and reduce construction delays.

These changes and other process improvements must be promptly implemented, in addition to significantly increasing the construction labor force, if the increased production levels required to support the Project schedule are to be obtained.

**Q. PLEASE DESCRIBE SCE&G'S PETITION.**

**A.** SCE&G filed this Petition to revise the construction schedules and capital cost schedules approved by the Commission in Order No. 2015-661. The primary reasons for filing the Petition are:

- To increase the estimated costs of the Units to reflect the impact of changes to the construction and capital cost schedules on the Project. The largest portion of the increase is \$781.1 million in EPC Contract cost increases, comprised of:
  - \$137.5 million in costs resulting from an amendment to the EPC Contract executed on October 27, 2015 ("Amendment" or "EPC Amendment"),
  - \$505.5 million in costs resulting from SCE&G's decision (pending PSC approval) to exercise an option in the EPC Amendment that moves many of the EPC Contract costs to a fixed cost category ("Option"),
  - \$85.5 million resulting from a reversal of the credit for liquidated damages previously granted to SCE&G's customers in Order No. 2015-661, and
  - \$52.5 million in increases due to Change Orders.

- 1           • To increase the estimated costs of the Units to reflect anticipated changes in the Owners
- 2           Cost by approximately \$20.8 million;
- 3           • To increase the estimated cost of the Units by \$45 million due to a combination of
- 4           AFUDC and Escalation;
- 5           • To increase the cost of Transmission infrastructure by \$4.3 million due to modifications
- 6           in the switchyard configuration;
- 7           • To change the construction schedule, including a change to the guaranteed substantial
- 8           completion dates (“GSCDs”) for the Units as agreed to by SCE&G in the Amendment,
- 9           which reflect delays primarily incurred due to late fabrication, delivery and erection of
- 10          structural modules and Shield Building panels associated with the Nuclear Island and
- 11          other delays associated with construction; and
- 12          • To advise the Commission of changes to the EPC Contract associated with the
- 13          withdrawal of CB&I from the Project, leaving WEC as the sole member of the
- 14          Consortium, and the retention of Fluor by WEC as the sub-contracted construction
- 15          manager of the Project.

16           The culmination of these changes is a delay of the GSCD of Unit 2 by about 2 and  
17          1/2 months (from June 19, 2019 to August 31, 2019) and a delay of the GSCD of Unit 3  
18          by about 2 and 1/2 months (from June 16, 2020 to August 31, 2020) from the GDSDs  
19          approved by Commission Order No. 2015-661. This delay also results in changes to many  
20          of the approved BLRA milestone dates.

21           With regard to costs, the SCE&G portion of the gross construction costs in future  
22          dollars will increase by approximately \$852 million, increasing the overall gross

1 construction cost in future dollars specified in Commission Order No. 2015-661 from  
2 approximately \$6.827 billion to approximately \$7.679 billion.

3 **Q. HOW DOES THIS PETITION DIFFER FROM PRIOR PETITIONS FILED BY**  
4 **THE COMPANY?**

5 **A.** This cost modification request differs from past requests in two important aspects.  
6 First, although the Company presents the changes as an amendment to the EPC Contract,  
7 the entire structure and nature of the EPC Contract has been changed. Second, there are  
8 substantive differences in SCE&G's approach to justify major cost increases associated  
9 with this Petition.

10 **Q. PLEASE DISCUSS THE MAJOR CHANGES TO THE EPC CONTRACT AS A**  
11 **RESULT OF THE AMENDMENT.**

12 **A.** A major change to the EPC Contract resulting from the Amendment was the  
13 withdrawal of CB&I from the Consortium and the sale of Stone and Webster, CB&I's  
14 nuclear construction subsidiary, to WEC. The Amendment included the terms and  
15 conditions for CB&I's exit, as well as new provisions limiting its liability and releasing  
16 CB&I from corporate guarantees on the Project. Therefore, WEC is now solely responsible  
17 for the execution of the EPC Contract. WEC subsequently contracted with Fluor to manage  
18 the construction of the Project as a sub-contractor reporting directly to WEC.

19 This contractual ownership change is a positive step forward in completing the  
20 Project. The commercial relationship between WEC and CB&I had deteriorated to the  
21 point that it was jeopardizing the completion of the Units. I view CB&I's exit as a necessary  
22 change.

1 In addition, there were several improvements to the EPC Contract structure which  
2 include:

- 3 • The resolution of current disputes. ORS supports the concept of resolving  
4 outstanding disputes and the amount for resolution is discussed separately  
5 below. Disputes were diverting attention and generating non-productive  
6 work for the Project team;
- 7 • The extension of equipment warranties to address coverage beyond the  
8 currently proposed GSCDs;
- 9 • The increase in liquidated damages associated with not meeting the  
10 currently proposed GSCDs;
- 11 • Tightening the definition of a “change in law,” which had been the subject  
12 of many disputes in the past;
- 13 • Establishing the Dispute Resolution Board (“DRB”) and defining the  
14 boundaries and terms within which it will operate;
- 15 • No interim lawsuits filed prior to the completion of the Units. This will  
16 better ensure the Project team remains focused on Project completion, rather  
17 than being diverted into supporting litigation;
- 18 • Upgrading the contractual basis of the design to Design Control Document,  
19 Revision 19 to agree with the licensing basis of the plant;
- 20 • Revising the construction milestone payment schedule to better align with  
21 Project priorities. While this should be an improvement to the EPC  
22 Contract, WEC and SCE&G have not yet been able to agree on the details



1 of this payment schedule and SCE&G has been making monthly payments,  
2 subject to a true up to invoices, until the final payment schedule is agreed  
3 upon. ORS is concerned that this matter has not been brought to a timely  
4 resolution as provided for in the Amendment. This dispute was submitted  
5 to the DRB in August 2016, and may be the first issue addressed by the  
6 DRB on this Project.

7 There are also changes to the EPC Contract structure that cause ORS concern. With  
8 regard to the federal production tax credit completion incentive, ORS prefers an incentive  
9 structure that would only provide the full incentive if the current production tax credit  
10 expiration dates are met, and would be reduced on a graduated scale if Congress extends  
11 the expiration dates.

12 ORS is also concerned about the level of price surety offered by the Option.  
13 Although ORS has received assurances from SCE&G and WEC executive management  
14 that WEC will abide by its commitment to complete the Project for the stated price, the  
15 avenues of recourse available to SCE&G should WEC demand additional funding are  
16 limited.

17 ORS is concerned about WEC's ability to absorb potential financial losses that  
18 SCE&G's sensitivity studies identify as possible if productivity and production are not  
19 significantly improved. The potential financial impacts identified in the sensitivity study  
20 are in the hundreds of millions of dollars. Under the revised EPC Contract structure  
21 outlined in this Petition, those costs would have to be borne by WEC or its parent company  
22 Toshiba. WEC has assured ORS that it recognizes the potential risk regarding the Units  
23 and Southern Company's Vogtle project, which has a similar contract, and is prepared to



1 proceed. WEC asserts it can complete both projects on schedule and understands the  
2 reputational damage that could occur in the world market if WEC fails to deliver or reneges  
3 on the South Carolina or the Georgia contracts.

4 ORS also has concerns about the relationship and co-operation between SCE&G  
5 and WEC in the context of a “fixed price” contract. Historically, fixed price contracts have  
6 been more adversarial and confrontational than other methods of contracting. Although the  
7 DRB is designed to handle conflicts and disputes expeditiously, it is not intended to be the  
8 preferred means to resolve all contract issues.

9 In addition, “fixed price” contracts have generally resulted in reduced participation  
10 and influence by the owners of the construction project. The sentiment and approach  
11 adopted by the contractor is generally, “we have guaranteed you the project for this price;  
12 leave us alone and we will deliver.” This is not an acceptable approach. ORS regards  
13 SCE&G’s participation as essential to the satisfactory completion of the Project.

14 In response to ORS’s concerns, ORS has been assured by SCE&G and WEC  
15 executive management that they expect to have a co-operative and collegial relationship  
16 for the remainder of the Project. However, such a relationship has yet to be fully  
17 demonstrated since the Amendment was signed. More specifically, SCE&G and WEC have  
18 not been able to negotiate a mutually acceptable milestone payment schedule and have had  
19 a continuing conflict over the format of Change Order proposals. Recent Change Order  
20 proposals have been “fixed price” proposals, and in some recent cases WEC is attempting  
21 to limit its pricing disclosures in Change Orders, resulting in a lower level of detail than  
22 was previously available. This lower level of detail makes it difficult for ORS to assess the

1 price and construction methodology. It is critical to ORS's review process that future  
2 Change Order proposals be supported by adequate price disclosure by WEC.

3 **Q. PLEASE DISCUSS THE EPC CONTRACT OPTION.**

4 **A.** The largest cost increase (\$505.5 million) in this Petition is associated with the  
5 Option. The premium associated with electing the Option is calculated by taking the  
6 difference between the cost WEC can charge to complete the Units under the Option and  
7 the corresponding price that was embedded in the schedules underlying Order No. 2015-  
8 661. The documentation provided to justify the Option cost is primarily based on either  
9 (1) establishing a comparison of the additional costs of the Option to forecasts of costs that  
10 WEC would charge if the Project proceeded under the previous contractual basis; or (2) a  
11 subjective analysis of the fixed price contract with little objective evidence of what the  
12 actual cost savings from those subjective benefits would be. The Company focuses its  
13 assessment of the value of the Option on the risk reduction achieved via the transfer of  
14 price risk to WEC. The presumed reduction in day-to-day scope changes and the resulting  
15 distraction of the dispute resolution process are cited as key benefits of the Option.  
16 However, no attempt was made to quantify these benefits. While I can agree that these  
17 benefits could accrue to the Project and that these benefits could reduce the friction and  
18 distraction caused by continuing adversarial negotiations over scope changes, it is difficult  
19 to assign a monetary benefit to these changes; and therefore, it is not possible to quantify  
20 their contribution to the value of the Option.

21 Perhaps the best justification for the Option is provided in the sensitivity studies  
22 offered in the testimony of Dr. Joseph M. Lynch, which indicate that SCE&G believes  
23 several hundreds of millions of dollars will be saved by exercising the Option compared to

1 continuing on the basis of current contract terms. This will be discussed later in my  
2 testimony.

3 However, since the start of the Project, WEC has not consistently demonstrated its  
4 ability to meet contractual commitments. The benefit to the ratepayers from the Option is  
5 only as good as WEC's financial ability and willingness to stand behind the EPC Contract.  
6 Based on our previous experience in the Project, ORS has little confidence in WEC's  
7 assurances that it will be able to deliver on its "fixed price" commitment.

8 While ORS understands the calculation of the \$505.54 million for the Option as it  
9 relates to EPC Contract costs, the Option was not constructed in such a way that a listing  
10 of itemized costs total the premium. Rather, it represents an overall agreement that takes  
11 into account both the costs to complete the project and a value WEC has assigned to its  
12 risk associated with fixing these costs. As such, ORS does not have sufficient  
13 documentation to justify a specific list of costs making up the Option. However, ORS does  
14 recognize that there are benefits to the Option, but only to the extent that SCE&G  
15 guarantees its ratepayers that the Option will truly fix the cost of the Project for those items  
16 and scopes included in the Option and that any additional EPC Contract costs (other than  
17 for changes in law or other very specific items such as force majeure events) will not be  
18 borne by SCE&G ratepayers. Absent such a guarantee from SCE&G, ORS could not  
19 support the \$505.5 million cost associated with the Option.

20 **Q. PLEASE DISCUSS THE COSTS ASSOCIATED WITH THE AMENDMENT TO**  
21 **THE EPC CONTRACT.**

22 **A.** The Amendment includes \$137.5 million in costs to resolve outstanding disputes.

23 While there have been previous amendments to the EPC Contract, those amendments were



1 based on detailed estimates of additional scopes of work to be done or previously  
2 completed work that caused additional costs. This Amendment is different in that it served  
3 as a comprehensive settlement that substantially changed the structure of the EPC Contract.  
4 It changed the structure of the Consortium itself, revised bonus and liquidated damages  
5 provisions, revised GSCDs, clarified definitions, resolved most outstanding disputes and  
6 offered SCE&G the ability via the Option to fix many of the EPC Contract costs. As such,  
7 it did not credit specific amounts to specific items.

8 For ORS to perform a thorough review of the Petition, ORS expects: 1) SCE&G  
9 and WEC to be in agreement on the cost and schedule, 2) that formalized agreements in  
10 the form of executed Change Orders to the EPC Contract will be in place, and 3) that  
11 detailed, auditable estimates to back up changes will be provided. In lieu of signed Change  
12 Orders, signed interim agreements which form the basis of future Change Orders are also  
13 acceptable.

14 However, for the majority of the costs associated with the Amendment in this  
15 Petition, such detailed formalized agreements or Change Orders do not exist. Instead, the  
16 major costs for the Amendment are based on resolving previous disputes which have been  
17 categorized by SCE&G as follows: (1) claims that could be reasonably specifically  
18 quantified by estimates or have defined costs, or (2) claims that have been asserted by the  
19 Consortium, but have not been specifically quantified by defined costs or estimates.  
20 SCE&G's Mr. Kochems presented direct testimony to the effect that the claims that could  
21 be reasonably quantified have an approximate value of \$224.4 million (see Chart B on page  
22 9). However, ORS has concerns regarding the basis for these values as detailed in the  
23 following paragraphs.

1           The first component identifies \$8.7 million of withheld payments in dispute due to  
2           poor labor productivity, inefficiency and delay costs, and, as part of the negotiation; these  
3           costs were credited to WEC. The full credit for this amount is not supported because the  
4           Consortium did not attain the stated productivity, performed substantially below the  
5           targeted labor productivity rates and was responsible for significant project delays in  
6           several areas, including module fabrication and delivery. Therefore, ORS cannot support  
7           providing a 100% credit to WEC. This same argument can be applied to the \$3.6 million  
8           applied to the excess escalation due to delay.

9           The second component addressed is \$45.9 million in disputes arising from  
10          regulatory revisions and changes in law. Many of the Consortium claims in this area were  
11          not justified, and represented an overreach by the Consortium. These claims were based on  
12          a very aggressive interpretation by WEC of the change in law provisions of the EPC  
13          Contract. In many cases, the Consortium maintained that meeting the requirements  
14          specifically stated in the Final Safety Analysis Report represented a change in law, or that  
15          the Nuclear Regulatory Commission's ("NRC") practice of rigorous and literal  
16          interpretation of codes and standards represented a change in law. Neither of these cases  
17          can be logically considered a change in law and should not be accepted as such. Therefore,  
18          ORS cannot support accepting all of the claims by the Consortium for disputes associated  
19          with regulatory revisions and changes in law and crediting their full value.

20          The third component involves \$47.5 million in claims addressing work charged to  
21          the Target Price category of the EPC Contract when it should have been charged to the  
22          Firm Price category. ORS is aware that many of these disputes involved working on-site  
23          to correct or complete sub-modules that were shipped to the site with defects or were

1 incomplete, or were transferred to the site because they could not be completed at the  
2 fabrication facility in time to meet construction needs. Module fabrication was originally  
3 assigned to the firm price portion of the contract; therefore, ORS agrees with SCE&G's  
4 original assertion that the work done on-site should also have been assigned to the Firm  
5 Price cost category of the EPC Contract, and the additional costs the Consortium assigned  
6 to the Target Price category was not appropriate. Therefore, ORS cannot support accepting  
7 the entire \$47.5 million value identified for this work.

8 The fourth component identifies \$27.5 million for producing as-built drawings  
9 versus the Consortium's plan to produce only as-designed drawings. However, the EPC  
10 Contract clearly states that as-builts will be provided. As-built drawings are also required  
11 by NRC regulations and by the Final Safety Analysis Report. Therefore, ORS cannot  
12 support accepting this value as justification for the increased costs in the Amendment.

13 The fifth component is \$66.0 million dollars for extending the warranties on plant  
14 equipment to provide coverage for two years beyond the actual GSCDs. ORS recognizes  
15 that there is value in the warranty extensions and commends SCE&G for including this  
16 item in the Amendment, especially as some components will be installed after their original  
17 manufacturer warranty has expired due to the construction delays. There is no detailed  
18 estimate that provides the basis for this cost, and the best estimate available was provided  
19 verbally to SCE&G during a meeting with the Consortium. Therefore, although ORS  
20 supports the inclusion of extended warranties and recognizes there is a cost associated with  
21 this extension, based on the documentation available ORS cannot assign a value of \$66.0  
22 million to this item.



1           The sixth component of \$60.3 million is associated with the resolution of disputes  
2           related to Change Orders which SCE&G had accepted, and on which the Consortium had  
3           begun construction, but SCE&G had not yet paid. These include cyber security on-going  
4           work, site layout changes associated with Phases 1 and 2, Shield Building panel mitigation  
5           which expanded the fabrication facilities at Newport News Industrial, and the on-going  
6           costs of changes to health care required by the changes in federal law. The justification for  
7           these changes appears to be adequately defined and appropriate.

8           The seventh component of \$4.3 million is associated with expanding the security  
9           for the off-site water treatment complex, providing fuel loading software and adding a  
10          secondary chemistry laboratory. The justification for these items appears to be reasonable  
11          and appropriate.

12          The eighth and final component is a \$39.4 million credit to SCE&G for 90% of  
13          \$78.8 million in disputed invoices already paid; assuming a 50-50 split would have  
14          ultimately resulted. Although this approach seems a reasonable compromise to resolve a  
15          dispute, it is not an adequate basis for ORS to support including a specific amount as  
16          justification for the cost increase.

17          With regard to those claims and disputes that Mr. Kochems defines in his direct  
18          testimony as not specifically quantifiable, it is not possible for ORS to make an informed  
19          judgment about the reasonableness of these costs. Mr. Kochems identifies these costs as  
20          “worth millions of dollars;” however, ORS cannot verify any specific amount.

21          In reviewing the specific examples cited by Mr. Kochems, ORS makes the  
22          following observations:

1           As part of the Amendment, Mr. Kochems advises that WEC agreed to identify and  
2           label subcomponents so that they could be specifically identified during plant operations  
3           and maintenance. This was cited as a large scope of work involving over 35,000  
4           components and subcomponents. However, ORS agrees with the original SCE&G position  
5           which maintained that this scope was already included in the base EPC Contract. This level  
6           of identification is an industry practice that has been in effect for at least twenty years and  
7           has been applied on every plant with which I am familiar. SCE&G was correct to expect  
8           this practice to be employed by WEC from the beginning and without additional cost.

9           Another example stated was that the Amendment resolved a dispute with WEC  
10          regarding timely access to technical manuals to assist SCE&G with developing plans and  
11          procedures to operate the plant. This was certainly an obligation in the original EPC  
12          Contract, and it should not be cited as a basis for increased costs.

13          The third example cited was WEC's agreement to provide the design and  
14          construction of the Annex Building walls and doors and the Auxiliary Building doors to  
15          meet the NRC 2009 Aircraft Impact Assessment Rule. ORS agrees with SCE&G's original  
16          position on this issue which was that these changes were included in the cost increases  
17          associated with Order No. 2012-844. Therefore, ORS does not support the inclusion of this  
18          item as a basis for increased costs

19          The final specific example addresses the elimination of calendar-based progress  
20          payments and cites the \$67.6 million in progress payments that SCE&G had withheld for  
21          contested progress payments. Again, ORS agrees with the original SCE&G position that  
22          these payments were not justified because WEC was the cause of unwarranted delays in  
23          the Project that resulted in the prolongation of these payments beyond the originally



1 intended intervals. ORS is in agreement that the elimination of these calendar-based  
2 payments is a definite benefit to the Project and commends SCE&G for removing these  
3 from the revised EPC Contract. The next important step is to negotiate the construction  
4 milestone-based payment schedule.

5 While there are certainly other unquantified benefits to the Amendment that provide  
6 value to the project, such as revising the definition of “change in law” to help prevent future  
7 contract disputes, there is no way to assign a dollar amount to these benefits.

8 Based on the documentation provided by SCE&G, ORS has determined that \$64.6  
9 million of the value claimed by SCE&G can be supported by the documentation provided.  
10 These amounts, however, were not presented individually for approval but as part of the  
11 justification for a larger settlement. ORS has insufficient support under our normal review  
12 processes to justify the approval of the total approximately \$137.5 million requested by  
13 SCE&G related to the EPC Contract Amendment. However, ORS does agree that the  
14 Amendment added value to the Project that it is difficult to quantify and, in the context of  
15 a larger settlement that included both the Option and a guarantee from SCE&G that the  
16 Option will truly fix the cost of the Project and that any additional EPC Contract costs  
17 (other than changes in law or other very specific items such as force majeure events) will  
18 not be borne by SCE&G ratepayers, ORS could support the inclusion of costs associated  
19 with the Amendment.

20 **Q. PLEASE ADDRESS THE COSTS INCLUDED IN THE CHANGE ORDERS.**

21 **A.** The total requested increase associated with the eleven Change Orders identified in  
22 the Petition is approximately \$52.5 million. ORS’s review supports the inclusion of \$32.6  
23 million for these Change Orders. When evaluating Change Orders, ORS expects that the

1 documentation supporting them will include signed Change Orders, signed agreements  
2 with detailed documentation that will form the basis for future Change Orders, or at the  
3 very least a mature level of detailed documentation supporting a Change Order that is  
4 nearly ready to be signed. In evaluating the documentation submitted at the time of the  
5 Petition against the ORS expectations, ORS found the support for Change Orders to be  
6 generally insufficient. In many cases, the justifications prepared by WEC were  
7 significantly and unilaterally modified by SCE&G. In other cases justifications were based  
8 solely on SCE&G estimates without formal input from WEC. During our review,  
9 documentation supporting the bases of these estimates was lacking and was by no means  
10 as rigorous and detailed as ORS expected to be presented for review.

11 In response to numerous ORS requests for information, SCE&G provided  
12 additional documentation, and in some cases, SCE&G subsequently obtained draft Change  
13 Orders or proposals from WEC that provided minimally acceptable bases for reviewing  
14 these Change Orders. Many of these came at a very late date as ORS was close to filing  
15 testimony. This is not an acceptable practice. Going forward, it is the position of ORS that  
16 until a Change Order has been agreed to by both parties, the costs associated with it should  
17 not be included in BLRA cost forecasts. This position will ensure that the necessary level  
18 of detail is provided to justify the cost and will ensure that WEC and SCE&G agree on the  
19 scope, schedule and cost.

20 I will now address the ORS assessment of each of the Change Orders below.

21 1) Plant Layout Security, Phase 3 (Approximately \$29.6 million)

22 The requested cost of approximately \$29.6 million is based on an internal  
23 estimate prepared by SCE&G. A proposal from WEC was subsequently received

by SCE&G on July 29, 2016, and has been reviewed by ORS; however, SCE&G has not yet completed its review and negotiations. The fixed price quoted by WEC in its proposal is approximately \$17.4 million (SCE&G's 55% share); however, the completion date does not support the GSCD for Unit 2, and these changes must be completed before the Unit is completed. It appears that the scope is now well defined; however, the final design and a final schedule have not yet been developed. The need to accelerate the schedule may increase the cost. Therefore, although ORS recognizes that the cost and schedule are not yet finalized, ORS finds there is sufficient definition to the scope and that the cost will in all probability be higher than that currently included in the WEC proposal. On the basis that ORS finds this estimate is likely lower than the final cost of the Change Order, ORS can support the approval of \$17.4 million for this Change Order. ORS is concerned, however, that the types of changes necessary to accelerate the schedule are still unknown and could result in a change in methodology that ORS has not yet evaluated.

2) Plant Security Systems Integration (Approximately \$7.1 million)

The requested cost of approximately \$7.1 million was based on an internal estimate prepared by SCE&G. A proposal which included a detailed technical description was received on July 24, 2016 from WEC which reduces this estimate to approximately \$6.3 million. However, the completion schedule proposed by WEC is beyond the need date required by SCE&G and a final schedule will not be available until an on-site summit is held with SCE&G. ORS reviewed the proposal and technical description and determined that the basis was adequately defined. However, the costs will in all probability increase when the schedule is accelerated



1 or when an alternate approach is developed to accommodate the needed completion  
2 date. Therefore, ORS supports the inclusion of \$6.3 million for this Change Order.

3 3) Service Building, Third Floor (Approximately \$6.9 million)

4 SCE&G has provided adequate technical justification for the late addition  
5 of the third floor in the Service Building. The need to consolidate the Operations  
6 Service Center into one facility in the Service Building, rather than separate  
7 facilities in each unit's Auxiliary Building, and the need for added space required  
8 for maintenance shops, engineering support, outage planning and other plant  
9 support services justify this addition. However, SCE&G has now decided that the  
10 entire scope of the Service Building (all three floors) will be removed from the  
11 scope of the EPC Contract and the Service Building will be built under SCE&G's  
12 direct supervision through a separate contracted organization. This means that this  
13 entire scope of work will be transferred to the Owner's Cost, and will be removed  
14 from the EPC Contract. Therefore, this should no longer be evaluated as a Change  
15 Order and should be removed from the costs for Change Orders and assessed under  
16 the Owner's Cost.

17 4) Training Staff Augmentation (Approximately \$4.4 million)

18 SCE&G has requested that WEC provide ten (10) AP1000 Senior Reactor  
19 Operator certified operations training instructors to supplement its training staff  
20 from May 2016 through December 2017 to assure that SCE&G meets the required  
21 date for having an adequate number of certified operators available to run the plant.  
22 Although this cost estimate has been developed by SCE&G with no formal proposal  
23 yet submitted by WEC, there are already similar WEC instructors in place and the

1 cost was developed based on extrapolating existing costs for the required duration.

2 Therefore, ORS supports SCE&G's requested amount for this Change Order.

3 5) Escrow – Software and Documentation (Approximately \$3.0 million)

4 ORS agrees with SCE&G that it is necessary to establish this escrow  
5 account to assure that access to software and important plant documentation is  
6 available should access through WEC not be available in the future. The technical  
7 scope has been adequately defined and an estimate has been provided by WEC  
8 naming an independent third party repository for this information. The technical  
9 requirements were completed under the previous EPC Contract, so this is a well-  
10 defined scope. Although no formal Change Order has been executed, ORS believes  
11 that the cost information is well developed. Therefore, ORS supports SCE&G's  
12 requested amount for this Change Order. ORS further recommends that SCE&G be  
13 required to continue to update the escrowed information should delays occur that  
14 extend construction beyond the scope included in the Change Order.

15 6) Corrective Action Program Interface—"CAP-I" (Approximately \$679,000)

16 The scope and costs associated with this change represent an extension of  
17 an on-going program already in place through the revised completion dates of the  
18 Project. Therefore, although the cost is based on an estimate from SCE&G without  
19 a formal executed estimate or Change Order from WEC, the cost represents merely  
20 an extension of known work. Therefore, this estimate is acceptable to ORS and  
21 ORS supports the requested amount.

22 7) Classroom Simulator (Approximately \$451,000)

1                   ORS has assessed SCE&G's justification for adding this classroom  
2                   simulator and agrees that it is a necessary addition to the plant in order to assure  
3                   that the regular plant simulator is available to fulfill its main functions associated  
4                   with operator training. This PC based system allows students, instructors,  
5                   maintenance personnel, plant engineers and procedure writers to accomplish  
6                   needed tasks without tying up the Plant Reference Simulator. The stated cost also  
7                   includes a four year maintenance agreement. ORS supports the requested amount.

8                   8) PMP Analysis (Approximately \$182,000)

9                   The cost represents a compromise reached between WEC and SCE&G to share on  
10                  a 50-50 basis the cost of updating the Probable Maximum Precipitation ("PMP")  
11                  analysis. A detailed WEC estimate has been provided and a draft Change Order is  
12                  in process. This work was required to implement an NRC requirement to update  
13                  the PMP analysis to reflect changes to the plant site layout and address changes  
14                  required as a result of Fukushima recommendations. ORS supports the requested  
15                  amount.

16                  9) ITAAC Maintenance (Approximately \$98,000)

17                  This change represents an extension of on-going work through the revised  
18                  completion dates. SCE&G estimated the cost of maintaining the Inspection Testing  
19                  Analysis Acceptance Criteria ("ITAAC") program required by the NRC based on  
20                  extrapolating the existing cost. ORS supports the requested amount.

21                  10) Primavera® Access (Approximately \$45,000)



1 Again this represents an extension of software license fees already held by  
2 SCE&G to the revised completion dates. SCE&G has estimated these costs by  
3 extrapolating current costs. ORS supports the requested amount.

4 11) Transmission Structure Redesign/Wetlands (Approximately \$5,000)

5 This request represents a redesign due to a revision of wetland boundaries  
6 that subsequently required the relocation of two transmission structures.  
7 ORS supports the requested amount.

8 In summary, ORS does not support the approval of item 3 (Service Building Third  
9 Floor Addition) as an EPC Contract Change Order for the reasons stated above but instead  
10 recommends considering the request along with Owner's Costs. ORS supports the approval  
11 of Change Orders in the amount of \$32.6 million, as described above.

12 **Q. PLEASE DISCUSS THE REVERSAL OF THE LIQUIDATED DAMAGES THAT**  
13 **SCE&G PREVIOUSLY CREDITED AGAINST THE PROJECT AS PART OF THE**  
14 **COST INCREASE GRANTED UNDER ORDER NO. 2015-661.**

15 **A.** SCE&G seeks the reversal of the \$85.5 million liquidated damages related to the  
16 previous EPC Contract, which was credited to ratepayers in Commission Order No. 2015-  
17 661. The justification for this reversal is that the terms of the EPC Contract have now  
18 changed. The GSCDs that were the basis for claiming the liquidated damages have now  
19 changed and the liquidated damages associated with this future date have been substantially  
20 increased.

21 While ORS is concerned that this credit has been reversed, ORS understands the  
22 credit may not have been enforceable due to the outstanding disputes and since it could be  
23 argued that SCE&G did not actually incur the damages. The Amendment also includes

1 liquidated damages provisions greater than the previous provisions, giving ratepayers the  
2 opportunity to gain credit for at least this amount in liquidated damages should the revised  
3 GSCD's not be met. As it reflects the amended contract, ORS supports the reversal \$85.5  
4 million in liquidated damages.

5 **Q. PLEASE DISCUSS THE REVISED GSCDS.**

6 **A.** In its Petition, SCE&G states that the revised GSCDs are August 31, 2019 for Unit  
7 2 and August 31, 2020 for Unit 3 per the Amendment. The causes for the additional delays  
8 are provided by SCE&G in its filing and testimony and are supported by ORS. ORS finds  
9 that the completion dates for the Units will be extended to at least these dates, and, in all  
10 likelihood, will extend beyond the revised GSCDs. At this time, it does not appear that the  
11 GSCDs will extend beyond the 18 month duration allowed by the Commission; however,  
12 this will be better known later this year when Fluor completes its review of the construction  
13 schedule. The most serious concern is that further delay of Unit 3 could jeopardize the  
14 federal production tax credits for this unit if the credits are not extended by Congress  
15 beyond their current December 31, 2020 expiration date. This would involve the loss of  
16 over \$1 billion in tax credits.

17 SCE&G explained in its testimony the reasons for its confidence in meeting the  
18 revised GSCDs. ORS does not share this confidence. SCE&G still does not have a reliable  
19 schedule for the Project, and will not have a reliable schedule until Fluor completes its  
20 review and works through the resource-loaded integrated schedule which is due in the  
21 fourth quarter of 2016. SCE&G asserted that this revision to the schedule is just a routine  
22 update that is part of the on-going regular day-to-day activities on a nuclear power plant  
23 project. I do not agree with this characterization. Although schedule modifications and



1 refinements are a regular activity on nuclear projects, the wholesale change-out of the  
2 construction contractor is not a regular event. The schedule changes that may result from  
3 this major revision to how the Project work is done and the updating of time frames  
4 assigned to each portion of work do not represent a business-as-usual process, and the  
5 impacts of this change need to be recognized as a major event. Fluor's review of and  
6 revision to the schedule represent a significant milestone for the Project.

7 Although the basic logic and sequencing of precursor and successor events and the  
8 level of detail presented in identifying the tasks and work scope in the current revised  
9 schedule appear sound, the assigned durations and the labor hours assigned to these tasks  
10 are highly questionable in that they appear to be too low. These values are still based on  
11 durations and hours determined by the previous construction contractor, and have proven  
12 to be unreliable. Targeted productivity has not been achieved and performance factors for  
13 each of the crafts have been significantly below expectations and goals. This strongly  
14 suggests that the durations and hours assigned to tasks within the schedule are not accurate  
15 and need to be increased in many cases. This also basically means that the Project will  
16 either (1) take longer, or (2) will require significant improvements in efficiency and  
17 productivity and/or will require considerably more resources than are currently anticipated.  
18 It must also be noted that these are not strictly linear relationships. Limitations on  
19 accessibility in certain areas and work sequencing may limit the numbers of construction  
20 staff that can be productively assigned to the Project. This impact will only be manifested  
21 when the resource-loaded integrated schedule is fully developed by Fluor.

22 ORS understands that the revised EPC Contract provides improved incentives to  
23 the contractor to complete the Project on schedule; however, ORS's experience has been

1 that WEC has not been able to maintain construction schedules or achieve forecasted  
2 productivity increases. Based on the lack of reliability in WEC's past performance, ORS  
3 is not confident that WEC can fulfill its new commitment. SCE&G also appears to  
4 demonstrate a lack of confidence in the current schedule through the base case assumptions  
5 in the sensitivity study provided in Dr. Lynch's direct testimony. These base case  
6 assumptions utilize a significantly lower productivity factor than has been provided as the  
7 basis for the revised schedule. This further bolsters ORS's skepticism about the reliability  
8 of the current schedule.

9 Notwithstanding, ORS supports the process and procedure improvements that are  
10 being implemented by Fluor to improve the efficiency and productivity of the construction  
11 work force. However, it is not clear at this point whether these improvements will result in  
12 the significant productivity and production improvements that are required in order to meet  
13 the GSCDs.

14 It should also be noted that this lack of certainty surrounding the schedule has  
15 hampered ORS's review of almost all other areas of the Project. Without having an  
16 adequate measure of the timing of activities, it is difficult for ORS to evaluate areas such  
17 as Owners Costs and Escalation. Many of these costs are related to the timing of the need  
18 for specific personnel. It is also difficult to evaluate Change Orders, particularly Change  
19 Orders where WEC is having difficulty meeting SCE&G's need date, without an adequate  
20 understanding of the certainty of the schedule. Additionally, with neither schedule of  
21 construction activities nor milestone payment schedule available, it is difficult for ORS to  
22 evaluate the timing of the information in Exhibit 2 to the Petition. In the context of an  
23 overall guarantee from SCE&G that the Option will truly fix the cost of the Project and

1 that any additional EPC Contract costs (other than changes in law or other very specific  
2 items such as force majeure events) will not be borne by SCE&G ratepayers, ORS's  
3 concerns regarding the potential impacts of this schedule uncertainty are somewhat  
4 diminished.

5 ORS recognizes that the change to the "fixed price" EPC Contract is designed to  
6 shift the risk of meeting the revised GSCD's to WEC. However, ORS must consider what  
7 happens to the Project if these dates are not met and WEC is not able to shoulder the large  
8 financial burden that Dr. Lynch's sensitivity studies predict that WEC would incur under  
9 such a scenario. WEC executive management assured SCE&G and ORS that WEC will  
10 abide by the terms of the EPC Contract and absorb the losses that are forecasted. WEC  
11 cited its need to fulfill the terms of the contract in order to secure future business and the  
12 reputational damage it would suffer if it were to default as the prime motivations for  
13 completing the Project under the currently proposed terms. However, ORS remains  
14 skeptical for reasons previously outlined in the discussion of the Option.

15 In summary, ORS recommends that the Commission approve the proposed revised  
16 GSCDs, recognizing that these are contractual dates and accurately reflect what is included  
17 in the Amendment, subject to certain conditions discussed below regarding the BLRA  
18 milestone schedule.

19 **Q. PLEASE DISCUSS THE REVISED BLRA MILESTONE SCHEDULE.**

20 SCE&G provided proposed revisions to the BLRA milestone schedule and the  
21 status of milestones already completed in Exhibit 1 of the Petition and in Mr. Byrne's direct  
22 testimony as Exhibit SAB-2. The revised dates reflect the impact of changing the GSCDs  
23 and other adjustments. ORS is concerned regarding the impact of Fluor's fully resource-



1 loaded integrated project schedule on the BLRA milestone schedule. While the BLRA  
2 milestone schedule is generally consistent with the current Project schedule logic, ORS is  
3 concerned that, within only a few months of an Order being issued in this Petition, the  
4 Project schedule reflecting Fluor's input may substantially alter the dates in the BLRA  
5 milestone schedule. WEC has acknowledged that the current Project schedule is not  
6 achievable without substantial improvements in both production and productivity. As  
7 such, ORS has concerns regarding the accuracy of the BLRA milestones within the  
8 schedule filed in this Petition. If the Commission chooses to approve this schedule, ORS  
9 recommends that the Commission require SCE&G to report on the results of Fluor's review  
10 and revision to the resource-loaded integrated project schedule when complete. ORS  
11 further recommends that the Commission require SCE&G to include in its quarterly reports  
12 data regarding both production and productivity as compared to what is forecasted in  
13 Fluor's revised fully resource-loaded integrated construction schedule, as well as  
14 construction progress towards the milestone payments that are contained in the milestone  
15 payment schedule.

16 **Q. DID YOU ALSO REVIEW THE OWNER'S COST UPDATE REQUEST?**

17 **A.** Yes, I reviewed the Owner's Cost filing submitted in the amount of approximately  
18 \$20.8 million in this Petition and in Mr. Kochems's testimony along with additional  
19 supporting documentation furnished by SCE&G. The level of detail provided and the  
20 approach utilized by SCE&G in developing its projected costs were reviewed by ORS and  
21 found to be sufficient. In addition, I ensured the estimated cost numbers were properly  
22 allocated and categorized.

1 As detailed in Mr. Kochems's testimony, the primary costs of approximately \$15.6  
2 million are attributable to the changes to the GSCDs and the increased duration of the  
3 SCE&G staff assigned to the Project. The SCE&G labor costs represent approximately \$11  
4 million of this total and the non-labor portion contributes approximately \$4.6 million.  
5 These non-labor costs include the extension of the NRC Resident Inspectors, continuing  
6 NND facilities rental and maintenance, continuing costs for software and equipment  
7 associated with testing, continuing training, continuing costs for computers, telephones and  
8 other office equipment and supplies and the addition of the senior consultants who will  
9 comprise the DRB which was added as a result of the contract Amendment.

10 A new cost component identified as "Schedule Improvement" in line 4 on Chart D  
11 in Mr. Kochems's testimony addresses the staffing of the Project Management  
12 Organization, primarily by contractors on the planned second shift. This second shift and  
13 these additional staff are essential elements to aid in meeting the revised GSCDs.

14 The final component of the Owner's Cost involves a reduction of approximately  
15 \$2.8 million due to a comprehensive review of NND and corporate staffing across all  
16 relevant cost centers.

17 Based on the ORS review of the information provided by SCE&G, it is concluded  
18 that the requested increased amount of approximately \$20.8 million should be approved by  
19 the Commission. It should also be noted that SCE&G will need to increase this value once  
20 it has determined a well-defined basis for the cost of removing the Service Building from  
21 the EPC scope and transferring it Owner's Cost, as discussed in my testimony on the  
22 Service Building, Third Floor Change Order.



1 **Q. PLEASE DISCUSS YOUR REVIEW OF THE ESCALATION AND ALLOWANCE**  
2 **FOR FUNDS USED DURING CONSTRUCTION (“AFUDC”) COSTS.**

3 **A.** In its Petition, SCE&G requested cost increases of approximately \$3 million for  
4 escalation costs and \$42 million for increases in AFUDC. Each of these costs is derived  
5 from the other cost components discussed above and their final value depends on the final  
6 values determined for the above components. The increase in escalation cost is primarily  
7 driven by the increases in the Owner’s Cost. The original estimate also included some  
8 escalation for transmission costs, which have since been removed at SCE&G’s request.  
9 ORS’s review verified the values of \$2.3 million for escalation and \$42.4 million for  
10 AFUDC cited in Mr. Kochems testimony. ORS recognizes, however, that this is an  
11 estimate and may change with shifts of items between cost categories and based on the  
12 revised milestone payment schedule, when issued. As such, there is still some uncertainty  
13 regarding this calculation.

14 **Q. COULD YOU PLEASE DISCUSS YOUR REVIEW OF THE SENSITIVITY**  
15 **ANALYSIS PROVIDED IN THE DIRECT TESTIMONY OF DR. JOSEPH M.**  
16 **LYNCH?**

17 **A.** The portion of Dr. Lynch’s testimony which I will address is a sensitivity study that  
18 assesses the efficacy of SCE&G’s decision to exercise the Option by comparing the  
19 projected costs of the Option against those of completing the Project under the previous  
20 terms and conditions. This study is designated Exhibit No. JML-1 in Dr. Lynch’s  
21 testimony. Dr. Lynch uses four different labor rates and six different performance factor  
22 scenarios to compare these options. He also provides the basis of the ratios he utilizes for  
23 field non-manual labor/direct labor (0.74) and indirect labor/direct labor (0.66) and

1 compares them with current ratios (1.22 and 1.21, respectively) to establish that those he  
2 uses in his study are conservatively lower and that using the current rates would make the  
3 “fixed price” option even more attractive.

4 Dr. Lynch’s assumptions and the scenarios selected are appropriate and  
5 meaningful. His selections of the “Base Case” for labor growth rates (2.9%) and “Most  
6 Likely” range for performance factors (1.5 to 2.0) cases are reasonable and the boundaries  
7 selected for the other cases also represent reasonable limits and are appropriately  
8 represented. The results demonstrate that for any reasonable scenario, the “fixed price”  
9 option is a good deal for SCE&G. For the purpose here, I will confine my remarks to only  
10 the “Base Case/“Most Likely” case presented by Dr. Lynch.

11 Referring to the “Cost-to-Complete the Units” chart on page 8 of Dr. Lynch’s  
12 testimony and using the second from the bottom line, at a performance factor of 1.5 the  
13 cost to complete is about \$3.7 billion compared to the “fixed price” amount of \$3.345  
14 billion. At a performance factor of 2.0, the cost to complete is approximately \$4.2 billion.  
15 This indicates that SCE&G expects WEC to lose from \$355 million to \$855 million on this  
16 Project irrespective of penalties or bonuses. If the labor growth rates are higher than the  
17 base case the losses would be even higher. This is a cause for concern.

18 If WEC is in fact willing to absorb losses and meet the obligations of the EPC  
19 Contract, then this is a good deal for both SCE&G and its ratepayers compared to the  
20 alternative. However, the benefits to the ratepayer are not so apparent if WEC does not  
21 meet its obligations. If WEC were to succeed in demands for additional funds to complete  
22 the Project, the ratepayers would bear the burden, not SCE&G. To the extent that SCE&G

1 guarantees the Option, shielding ratepayers from WEC's potential failure to meet the terms  
2 of the contract, ORS would agree that the Option has value to ratepayers.

3 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

4 **A.** Yes, it does.

1     **BY MR. NELSON:**

2     **Q**     Did you also prepare three pages of settlement  
3             testimony, which was filed with this Commission on  
4             October 29th of this year?

5     **A**     Yes.

6     **Q**     Do you have any edits or corrections to your prefiled  
7             settlement testimony?

8     **A**     No, I do not.

9                     **MR. NELSON:** Mr. Chairman, I would ask the  
10                    prefiled settlement testimony of Mr. Jones be read  
11                    into the record as if given orally from the stand.

12                    **CHAIRMAN WHITFIELD:** Yes, sir, Mr. Nelson.  
13                    Mr. Jones' prefiled settlement testimony will be  
14                    entered into the record as if given orally from the  
15                    stand.

16                    [See pgs 934-937]

17                    **MR. NELSON:** Thank you, Mr. Chairman.

18     **BY MR. NELSON:**

19     **Q**     Mr. Jones, did you prepare a summary of your settlement  
20             testimony?

21     **A**     Yes.

22     **Q**     Would you please present it to the Commission.

23     **A**     Yes, thank you.

24                    Short and sweet: With regard to my settlement  
25                    testimony, I fully support the settlement agreement.



1            And that concludes my summary.

2                    **MR. NELSON:** Thank you, Mr. Jones.

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23    [PURSUANT TO PREVIOUS INSTRUCTION, THE  
24    PREFILED SETTLEMENT TESTIMONY OF GARY C.  
25    JONES FOLLOWS AT PGS 934-937]

**THE OFFICE OF REGULATORY STAFF  
SETTLEMENT TESTIMONY**

**OF**

**GARY C. JONES**

**SEPTEMBER 28, 2016**



**DOCKET NO. 2016-223-E**

**Petition of South Carolina Electric & Gas Company for  
Updates and Revisions to Schedules Related to the  
Construction of a Nuclear Base Load Generation  
Facility at Jenkinsville, South Carolina**

**SETTLEMENT TESTIMONY OF****GARY C. JONES****ON BEHALF OF****THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF****DOCKET NO. 2016-223-E**

**IN RE: PETITION OF SOUTH CAROLINA ELECTRIC & GAS COMPANY  
FOR UPDATES AND REVISIONS TO SCHEDULES RELATED TO THE  
CONSTRUCTION OF A NUCLEAR BASE LOAD GENERATION FACILITY  
AT JENKINSVILLE, SOUTH CAROLINA**

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.**

**A.** My name is Gary C. Jones, P.E. I am President of Jones Partners, Ltd., a private consulting engineering firm in the electrical power generation field. My business address is 1555 North Astor Street, Apt. 22W, Chicago, Illinois, 60610-5765.

**Q. DID YOU PREVIOUSLY FILE DIRECT TESTIMONY IN THIS DOCKET?**

**A.** Yes, I did.

**Q. WHAT IS THE PURPOSE OF YOUR SETTLEMENT TESTIMONY IN THIS PROCEEDING?**

**A.** The purpose of my settlement testimony is to provide ORS's support for the Settlement Agreement ("SA") reached in this docket for SCE&G's Petition for Updates and Revisions to Schedules Related to the Construction of a Nuclear Base Load Generation Facility at Jenkinsville, SC ("Petition").

**Q. WHO ARE THE PARTIES TO THE SETTLEMENT AGREEMENT?**

**A.** ORS, SCE&G, The Electric Cooperatives of South Carolina, Inc., Central Electric Power Cooperative, Inc., Frank Knapp, Jr., and the South Carolina Energy Users

Committee (“Settling Parties”).

**Q. WHAT ARE THE MAJOR TOPICS ADDRESSED IN THE SETTLEMENT AGREEMENT?**

**A.** In the Settlement Agreement (“SA”), the Settling Parties agree to support the new Guaranteed Substantial Completion Dates of August 31, 2019 and August 31, 2020, respectively. Of the \$852 million requested in the Petition, the Settling Parties agree to support \$831.3 million. SCE&G agrees to fix the price to consumers for EPC contract costs according to the terms of the Settlement Agreement (“the Guarantee”) (SA paragraph #12). The Settlement Agreement sets a moratorium for filing future modification requests on items not covered by the Guarantee until at least January 28, 2019 (“the Moratorium”) (SA paragraph # 13) and for revised rates beginning in 2017, the return on equity (“ROE”) is reduced from 10.50% to 10.25% (SA paragraph #18). These are the major components of the Settlement Agreement.

**Q. WHAT COMPONENT OF THE SETTLEMENT AGREEMENT DO YOU CONSIDER MOST IMPORTANT?**

**A.** All of the terms of the Settlement Agreement are important because they work together to benefit ratepayers. From my perspective, the Guarantee is the most important aspect of the Settlement Agreement because this provision encourages accountability for construction costs and preserves the benefits to ratepayers from electing the Option.

**Q. IN THE CONTEXT OF THE SETTLEMENT AGREEMENT, WHAT IS YOUR OPINION ON THE COSTS ASSOCIATED WITH THE PETITION?**

**A.** The Settlement Agreement mitigates the risks associated with electing the Option. In the context of the Settlement Agreement and the potential costs outlined in SCE&G’s



1 sensitivity analysis, the collective Settlement Agreement is reasonable.

2 **Q. DO YOU SUPPORT THIS SETTLEMENT AGREEMENT?**

3 **A.** Yes, I support this Settlement Agreement. It represents a collaborative effort to  
4 address the concerns raised by ORS and the Settling Parties during our review of the  
5 Petition.

6 **Q. WHAT IS YOUR RECOMMENDATION?**

7 **A.** I recommend that the Commission approve the Settlement Agreement.

8 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

9 **A.** Yes, it does.

1                    **MR. NELSON:** Mr. Chairman, Mr. Jones is  
2                    available for questioning from the nonsettling  
3                    parties or from the Commissioners.

4                    **CHAIRMAN WHITFIELD:** Thank you, Mr. Nelson.  
5                    Ms. Thompson.

6                    **MS. THOMPSON:** No questions. Thank you, Mr.  
7                    Chairman.

8                    **CHAIRMAN WHITFIELD:** Mr. Guild.

9                    **MR. GUILD:** Thank you, Mr. Chairman.

10                  **CHAIRMAN WHITFIELD:** Let's go ahead and mic  
11                  you up.

12                  **MR. GUILD:** Yes, sir.

13                                [Brief pause]

14                                **CROSS EXAMINATION**

15                  **BY MR. GUILD:**

16                  **Q**     Good afternoon, Mr. Jones.

17                  **A**     How do you do, sir?

18                  **Q**     So, I'm a little puzzled, Mr. Jones, about some of the  
19                  timing aspects of your testimony. Your prefiled direct  
20                  testimony bears a date of September 1, this year, does  
21                  it not?

22                  **A**     Yes.

23                  **Q**     All right. And as does the settlement agreement entered  
24                  into by your client, ORS, and the other settling parties  
25                  also: September 1, 2016. Correct?

1     **A**     Yes.

2     **Q**     So, is it fair to say that you prepared your prefiled  
3             direct testimony in contemplation of the execution of  
4             the settlement agreement on that day?

5     **A**     Yes.

6     **Q**     Were you a party to the settlement agreement –  
7             settlement discussions, should I say, or negotiations?

8     **A**     I was a party to drafting the terms of the settlement  
9             agreement relative to what we believed would be a fair  
10            settlement for the ratepayers of South Carolina.

11    **Q**     Right, and so what aspect of the agreement itself would  
12            that represent?

13    **A**     I think it represents the majority of the agreement.  
14            There were certain things that I wasn't involved with.  
15            For example, I had no input relative to the change in  
16            the ORE<sub>[sic]</sub>.

17    **Q**     I'm sorry?

18    **A**     The ORE, the return –

19    **Q**     The return on equity, the adjustment to the return on  
20            equity?

21    **A**     Right.

22    **Q**     All right. Do you have a settlement agreement available  
23            to you?

24    **A**     Yes.

25    **Q**     Would you turn to page 14-of-22 of that document,

1            please? And for those who don't have the document  
2            handy, or just to focus your mind, if you would, would  
3            you just read paragraph 21 for the record, please?

4     **A**     Again, would you repeat the –

5     **Q**     Number 21, and that's page 14-of-22. Paragraph 21.

6     **A**     “The settling parties agree to cooperate in good faith  
7            with one another in recommending to the Commission that  
8            this settlement agreement be accepted and approved by  
9            the Commission as a fair, reasonable and full resolution  
10          of all issues in the above-captioned proceeding, and  
11          shall neither take any position contrary to the good  
12          faith duty agreed to herein nor encourage or aid any  
13          other Intervenor to take a position contrary to the  
14          terms of this settlement agreement. The settling parties  
15          agree to use reasonable efforts to defend and support  
16          any Commission order with no other provisions issued  
17          approving this settlement agreement and the terms and  
18          conditions contained herein.”

19     **Q**     All right. And did you have that provision of the  
20            settlement agreement in mind when you prepared your  
21            prefiled direct testimony in this case?

22     **A**     I could say that I would – yes, I would be aware that –  
23            I had participated in settlement agreements before and  
24            there's usually some statement to that effect.

25     **Q**     So you were aware, when you prepared your direct



1            testimony, in the event that the settlement agreement  
2            that was inked that day and contemplated by you, that it  
3            would bind you to defending the settlement agreement in  
4            your testimony before the Commission.

5     **A**     Yes.

6     **Q**     Thank you. All right. Now, I have your prefiled direct  
7            testimony, and if I could direct your attention to page  
8            33. I think it's correctly numbered 33. It's 33-of-34  
9            and not 33-of-33, but I believe it's 33. And I wanted  
10           to direct your attention to the testimony that begins on  
11           line 15. And as a preliminary, to make sure – that line  
12           15 on that page says, “This indicates that SCE&G...”

13           Are we on the same page?

14     **A**     Yes, sir.

15     **Q**     Okay, good. So as a preliminary, I wanted to just  
16           confirm you were present in the hearing room during Mr.  
17           Marsh's testimony for the company?

18     **A**     Yes.

19     **Q**     And during Dr. Lynch's testimony for the company?

20     **A**     Yes, right.

21     **Q**     And so, we had this discussion I trust you heard about  
22           Dr. Lynch's sensitivity analysis and his conclusion that  
23           the fixed-price option was advantageous to the company  
24           because Westinghouse would face a range of costs that it  
25           was obligated to absorb under that option, in order to

1            complete the project, given the sensitivity analysis of  
2            Dr. Lynch. You hear that testimony?

3     **A**     Yes.

4     **Q**     Okay. Now we'll delve into that in a moment, but with  
5            that in mind, and you were referring to that sensitivity  
6            analysis at this point in your testimony, would you read  
7            your testimony at that page – again, 33 – beginning at  
8            line 15, please.

9     **A**     “This indicates that SCE&G expects WEC,” Westinghouse,  
10            “to lose from \$355 million to \$855 million on this  
11            project, irrespective of penalties or bonuses.” You  
12            want me to continue?

13    **Q**     Yeah, please.

14    **A**     “If the labor growth rates are higher than the base  
15            case, the losses would be even higher. This is a cause  
16            for concern.”

17    **Q**     All right. Please continue.

18    **A**     “If WEC is, in fact, willing to absorb losses and meet  
19            the obligations of the EPC contract, then this is a good  
20            deal for both SCE&G and its ratepayers, compared to the  
21            alternative. However, the benefits to the ratepayer are  
22            not so apparent if WEC does not meet its obligations.  
23            If WEC were to succeed in demands for additional funds  
24            to complete the project, the ratepayers would bear the  
25            burden, not SCE&G. To the extent that SCE&G guarantees

1            the option, shielding ratepayers from WEC's potential  
2            failure to meet the terms of the contract, ORS would  
3            agree that the option has value to ratepayers."

4    **Q**    Okay. And you stand by that testimony today?

5    **A**    Yes.

6    **Q**    Let's look, please, at page 29 of your prefiled direct  
7            testimony, Mr. Jones. I want to direct your attention  
8            to line five and the testimony that begins there. Would  
9            you read that for the record, beginning at line five,  
10          please, page 29-of-34?

11   **A**    From the start, you want me to read the entire  
12          paragraph?

13   **Q**    Yes, please.

14   **A**    All right. "ORS recognizes that the change to the  
15          fixed-price EPC contract is designed to shift the risk  
16          of meeting the revised GSCDs to WEC. However, ORS must  
17          consider what happens to the project if these dates are  
18          not met and WEC is not able to shoulder the large  
19          financial burden that Dr. Lynch's sensitivity studies  
20          predict that WEC would incur under such a scenario. WEC  
21          executive management assured SCE&G and ORS that WEC will  
22          abide by the terms of the EPC contract and absorb the  
23          losses that are forecasted. WEC cited its need to  
24          fulfill the terms of the contract in order to secure  
25          future business and the reputational damage it would

1        suffer if it were to default as the prime motivations  
2        for completing the project under the currently proposed  
3        terms. However, ORS remains skeptical for reasons  
4        previously outlined in the discussion of the option.”

5    **Q**    All right. Thank you. You stand by that testimony?

6    **A**    Yes.

7    **Q**    What are the reasons you allude to, at the conclusion of  
8        that paragraph, that you are skeptical about  
9        Westinghouse's ability to complete the project on time?

10   **A**    What are the reasons? Oh, okay. Well, I think one of  
11        the reasons is we were concerned about their performance  
12        to date. Also, as you have alluded to in the hearing  
13        previously, we are aware of some financial difficulties  
14        with their parent organization. And, also, the fact  
15        that the amounts of money involved were substantial.

16   **Q**    Okay. Have you followed the progress of Westinghouse's  
17        management of the Levy project in Florida?

18   **A**    Only through standard press releases and that kind of  
19        thing, what's in the industry press.

20   **Q**    You understand that Westinghouse suffered significant  
21        losses as a result of the cancellation of the Levy  
22        project?

23   **A**    I am aware that they have indicated that there were some  
24        write-offs on that project, yes.

25   **Q**    And are you aware that the write-offs on that project



1            were the source of a large portion of the fraudulent  
2            accounting attributable to the parent, Toshiba  
3            Corporation, understating losses at the Levy project?

4     **A**     I am aware that Toshiba has, I think, been charged with  
5            that. As far as I know, there's a continuing  
6            investigation going on.

7     **Q**     Right, an investigation by the US Department of Justice  
8            and the Securities and Exchange Commission in this  
9            country?

10    **A**     Yes, that's my understanding.

11    **Q**     And findings adverse to Toshiba by the authorities in  
12            Japan resulted in substantial fines against the Toshiba  
13            Corporation?

14    **A**     I have read of those, yes, sir.

15    **Q**     And resignation and, as we learned from Mr. Marsh I  
16            believe, a complete replacement of the Board of Toshiba,  
17            the parent of Westinghouse.

18    **A**     I can't say I'm aware of that detail. I'm aware of the  
19            resignation of the chief executive, but I don't recall  
20            the resignation of the entire Board.

21    **Q**     And so, to the extent that, in the hypothetical  
22            circumstance, that, as you have expressed with regard to  
23            the skepticism about Westinghouse's performance, to the  
24            extent that we assume the worst – and that is, that  
25            Westinghouse defaults on this obligation – ratepayers

1        are only protected to the extent that the guarantee, as  
2        you characterize it, in the settlement agreement  
3        obligates SCANA Corporation to absorb those losses;  
4        isn't that correct?

5     **A**    I think the settlement agreement that we reached is  
6        related to the EPC contract. So, if there is scope  
7        still within the EPC contract at the time that this  
8        default occurred, and Toshiba would not or could not  
9        stand behind the contract – if we speculate all those  
10       things, that there is still scope remaining in the  
11       original scope, or in the current scope of the EPC  
12       contract – then our settlement agreement indicates that  
13       SCE&G would stand by that, those costs.

14    **Q**    And you rely on the terms of the settlement agreement,  
15        as executed, to provide that assurance, correct?

16    **A**    Yes.

17    **Q**    To the extent that that settlement agreement, which will  
18        speak for itself – the language is before the Commission  
19        – to the extent it does not protect ratepayers or has  
20        loopholes in it, ratepayers would not be protected under  
21        those circumstances, correct?

22    **A**    If you speculate that that's the case – I would say, if  
23        there are loopholes that we are not aware of and if you  
24        speculate that to be the case, then they would not be  
25        protected if there were obvious – or, hidden loopholes.

1     **Q**     Well, I'm not asking you to speculate. The agreement –  
2             the settlement agreement will speak for itself. Its  
3             terms are in writing and before the Commission for their  
4             review. But I'm asking you, Mr. Jones, when you  
5             participated in negotiating this agreement, you, I  
6             assume, exercised due diligence – you didn't just  
7             speculate – exercised due diligence to try to assure  
8             that ratepayers were protected under a series of  
9             reasonable circumstances that might evolve in this  
10            project. Isn't that the case?

11    **A**     Yes. Our primary objective was to assure that the  
12            fixed-price was a fixed price of the EPC contract and  
13            would be so carried out to the South Carolina  
14            ratepayers.

15    **Q**     And your concerns, your uncertainty, about  
16            Westinghouse's ability to absorb the very losses that  
17            SCANA projects may occur, those weren't speculation;  
18            those were based on sound judgment on your part, were  
19            they not?

20    **A**     I would not say that we speculated that this was going  
21            to happen – I mean, forecasted that this was going to  
22            happen, but we wanted some protection to ensure that, in  
23            the event it did happen, that the ratepayers would be  
24            protected.

25    **Q**     All right. Has ORS asked you to opine or assess what

1            the potential responses might be, should  
2            Toshiba/Westinghouse walk away from this project and,  
3            essentially, default on its obligation to complete the  
4            plants?

5     **A**     We had some discussions about what options could be,  
6            such as bringing in another contractor, whether that  
7            would be feasible or not. But to formally ask me to  
8            outline various scenarios, no. We did have some  
9            discussions in that realm.

10    **Q**     And in the context of those discussions, did you  
11            understand that any of those options might entail  
12            additional cost burdens to ratepayers above and beyond  
13            the fixed price that's assumed to be the outcome of the  
14            amended EPC contract with option?

15    **A**     Yes, sir. There may be additional cost above and beyond  
16            the EPC contract, some of which are addressed in the  
17            agreement. There's potential, as we've discussed – as  
18            has been discussed several times in the hearings:  
19            changes in law. But, also, if, in fact, the option was  
20            selected to choose another contractor, there might be  
21            costs above and beyond the EPC contract included there,  
22            also.

23    **Q**     All right. And how much would those additional costs  
24            be? Order of magnitude best estimate.

25    **A**     I cannot say, because it is totally dependent on the



1            status of the project at the time. You know, it will  
2            take a while to exhaust the funds that are there, so  
3            more than likely, you know, it would be – there would  
4            not be much of the project left to complete. I can't  
5            really – the costs could range considerably, based on  
6            the timing of when such an event occurred.

7    **Q**    You open your testimony by observing that, at least as  
8            of June 30th of this year, using direct labor man-hours  
9            as the measure of completion, that the project was only  
10           22 percent complete; is that right?

11   **A**    Yes, sir, and I want to emphasize that – and I put it in  
12           my testimony – this was based on construction man-hours  
13           only. It did not include equipment delivered to the  
14           site, and it was only associated with the EPC contract,  
15           so it did not include site work, any of those things.  
16           It was the labor man-hours associated with the EPC  
17           contract.

18   **Q**    And those measures were measures that were used in  
19           reporting by the company or –

20   **A**    Yes, sir – I'm sorry.

21   **Q**    I'm sorry, go ahead.

22   **A**    I obtained that information from reports by the  
23           contractor, themselves.

24   **Q**    And labor man-hours is an appropriate measure; it's a  
25           measure used by Dr. Lynch, in part, in assessing his

1            sensitivity analysis of the value of the fixed-price  
2            contract, isn't it?

3     **A**     Yes, I believe it's – and it's a good measure of the  
4            current state the project is in, because the majority of  
5            costs remaining on the project are, in fact, labor  
6            hours.

7     **Q**     As a witness for the company stated, most of the  
8            components are on-site, we've paid for them already;  
9            we've got to put them together, right? That's the  
10          labor.

11    **A**     Yes.

12                    **MR. GUILD:** That's all I have, Mr. Chairman.  
13                    Thank you, Mr. Chairman. I appreciate it.

14                    **CHAIRMAN WHITFIELD:** Thank you, Mr. Guild.  
15                    Ms. Wright?

16                    **CROSS EXAMINATION**

17    **BY MS. WRIGHT:**

18    **Q**     Good afternoon.

19    **A**     How you doing?

20    **Q**     All right. How are you?

21    **A**     I'm fine.

22    **Q**     I just have a few questions for you. I'll have to think  
23            about how I have to ask you this. In your direct  
24            testimony, did you say WEC was not – had not  
25            consistently demonstrated its ability to meet

1            contractual commitments?

2     **A**     I believe that is the case. I would –

3     **Q**     I think that's page 13 in the first paragraph.

4     **A**     [Indicating.] Yes, ma'am, that is correct.

5     **Q**     And didn't you also say the ORS has little confidence in  
6            WEC's assurances that it will be able to deliver on its  
7            fixed-price option?

8     **A**     Yes, ma'am, I believe that's also correct.

9     **Q**     And now you are in support of this option?

10    **A**     Yes, ma'am.

11    **Q**     Okay. Would you say that the main reason you've had a  
12            change is that the ORS has agreed to the settlement, and  
13            that would be the change in your attitude to these  
14            problems that you had with the amendment to begin with?

15    **A**     I believe my major support for this is due to the terms  
16            in the settlement agreement itself.

17    **Q**     Didn't you have about 25 – and I can go through and find  
18            them, if you like – points that you felt that the ORS  
19            could not support – the ORS finds – it cannot make an  
20            informed judgment because of information that hadn't  
21            been forthright?

22    **A**     Well, don't recall the exact number, but I believe what  
23            you're –

24    **Q**     Right.

25    **A**     – asking me is, were there things that I thought that

1            SCE&G had not provided sufficient documentation for us  
2            to make an assessment that they were, in fact, justified  
3            as cost increases. That is part of my testimony, yes.

4    **Q**    Okay. Could you give me a reason why it wouldn't be  
5            prudent now to stop this build before it goes any  
6            further?

7    **A**    Well, I think the primary reason, as has been pointed  
8            out by Dr. Lynch's testimony and that he establishes, is  
9            that stopping it would not be beneficial to the  
10           ratepayers of South Carolina.

11   **Q**    But isn't it true that it's 70 percent still to go, that  
12           it's only 30 percent complete by the labor man-hours'  
13           rates that you're using?

14   **A**    Again, that is the labor associated with the EPC  
15           contract, and that number has, of course, changed  
16           somewhat since the time of the preparation of the  
17           testimony. But there's still a lot of work on the labor  
18           front left to do.

19   **Q**    Well, didn't you say it was 22, and therefore when I say  
20           70 percent, it's actually more than 70 percent?

21   **A**    Well, the timing is the issue, ma'am. At the time that  
22           I testified, I think that number was good –

23   **Q**    So –

24   **A**    – as of August 1st, or – I'd have to look at the  
25           testimony to get the date. But work has progressed

1           beyond that since then, so the number's a little bit  
2           different than 70 percent.

3   **Q**     So you don't believe they should stop the build, even  
4           though there is still three-point-some-figure billion  
5           yet to go to be placed on this build?

6   **A**     No, ma'am, I do not think they should stop.

7                   **MS. WRIGHT:** All right. That's all the  
8           questions I have.

9                   **CHAIRMAN WHITFIELD:** Thank you, Ms. Wright.  
10           Commissioners? Commissioner Randall.

11                   **VICE CHAIRMAN RANDALL:** Thank you, sir.

12                                   **EXAMINATION**

13   **BY VICE CHAIRMAN RANDALL:**

14   **Q**     Mr. Jones, reading on page 12, I think, of your direct  
15           testimony – it's the very top part of that – you said  
16           it's critical to ORS's review process that future  
17           change-order proposals be supported by adequate price  
18           disclosure by Westinghouse. Since critical and  
19           comprehensive input from ORS is critical to the  
20           Commission, and what we can do, what our decisions come  
21           to, what can be done to make sure that ORS is supplied  
22           with all the information it needs, in your opinion?

23   **A**     Well, there's a couple of things, I think. And SCE&G  
24           supports this also. They have pursued with Westinghouse  
25           to expand – there have been some costs that are in



1            preparation, some cost estimates that are in  
2            preparation, and SCE&G was also concerned that  
3            Westinghouse was taking the tack of not providing  
4            adequate backup and just providing a fixed price, in  
5            essence. So SCE&G, itself, is pursuing a more detailed  
6            and expansive cost accounting, if you want to say, for  
7            Westinghouse, when they submit any cost increases. This  
8            was evident and, as we were preparing testimony and  
9            since the filing began, many of the change orders that  
10           were in the original Petition, Westinghouse subsequently  
11           provided change order – formal change orders to those.

12                From our standpoint, from ORS' standpoint, what we  
13                want to see, and actually what was also added to the  
14                settlement agreement, was, any cost changes in the  
15                future that are to come before the Commission are to  
16                have a signed, approved change order associated with  
17                them, and if we've got that, we feel we'll have  
18                sufficient documentation for those changes.

19                        **VICE CHAIRMAN RANDALL:** Okay, thank you.

20                        Thank you, Mr. Chairman, that's all I've got.

21                        **CHAIRMAN WHITFIELD:** Thank you, Commissioner  
22                Randall.

23                        Commissioner Hamilton.

24                        **COMMISSIONER HAMILTON:** Thank you, Mr.  
25                Chairman.

**EXAMINATION**

**BY COMMISSIONER HAMILTON:**

**Q**     How are you, Mr. Jones?

**A**     Fine. Thank you, sir.

**Q**     Looks like you're the last man standing.

[Laughter]

Mr. Jones, let me ask you – I'm not sure of your –  
how your work relationship is with the site, but how  
much time do you spend on the site?

**A**     In an average month, I visit the site once a month. We  
have a site tour where we review the construction status  
by visually verifying it. Then we have a series of  
meetings with each of the senior managers from SCE&G.  
We also have a briefing with the lead Westinghouse man  
on-site, Carl Churchman, and he's accompanied by the  
leading Fluor construction manager on-site, Jeff  
Hawkins. So this series of meetings extends over two  
days, usually. In addition to that, while I'm away from  
the site, I do a lot of documentation review; I look at  
the status reports, the plan of the day, all the  
progress reports that are generated, construction  
metrics. So I do a lot of document review away from the  
site also, in addition to the on-site reviews that  
occur.

**Q**     All right. Have you and your team – do you realize or

1        see any tangible evidence of a better working  
2        relationship now, with Fluor, than it was with CB&I?

3     **A**    Absolutely, yes, sir. The craft, themselves, reflect  
4        the different attitude. You know, it's anecdotal, but  
5        you actually see the craft smiling and talking to you  
6        when you go out to the job site now. Before, that  
7        wasn't happening. They weren't happy and that was  
8        reflected in their work.

9                We see Mr. Churchman as a very positive leader. He  
10        is focused on completing the project, and he is much  
11        more assertive and direct in his approach to the project  
12        than the previous leadership.

13               In addition to that, I think one of the things I'm  
14        most pleased to see is a greater role and a greater  
15        acceptance of that role, of SCE&G's role on the project.  
16        They have an organization on-site that's called the  
17        project management office. And that office is – there's  
18        an SCE&G management person in that project management  
19        office, and they have direct input into the day-to-day  
20        construction at the site.

21               So since Fluor has come on-board, I've seen a lot  
22        of positive changes, both in management, management  
23        attention, management focus, and down to the craft  
24        level, itself.

25     **Q**    I assume, then, you're telling me it's a very positive

1            move?

2     **A**     Yes, sir.

3                     **COMMISSIONER HAMILTON:** Thank you, sir, Mr.  
4                     Jones.

5                     **CHAIRMAN WHITFIELD:** Commissioner Hall.

6                     **COMMISSIONER HALL:** Thank you, Mr. Chairman.

7                                     **EXAMINATION**

8     **BY COMMISSIONER HALL:**

9     **Q**     Good afternoon, Mr. Jones. In your direct testimony,  
10            page six, you indicate the changes and other process  
11            improvements need to be promptly implemented, in  
12            addition to significantly increasing the labor force.  
13            Are you concerned that there's a lag between the  
14            implementation of the new, improved processes and an  
15            actual demonstration of increased productivity?

16     **A**     I think the progress was slower than we would have liked  
17            to have seen in the beginning, but it has since picked  
18            up. We've seen some very positive changes made in the  
19            procurement area, for example, in the welding program,  
20            hiring. So the changes were a little slow in the  
21            beginning – and especially in the January to April, when  
22            Fluor did not have direct management control of the  
23            craft – but since that time, it's picked up, and I'm  
24            more positive on what I'm seeing there in the changes to  
25            the processes that they're implementing.

1     **Q**     Okay. So you think that was more of a transition thing  
2             or –

3     **A**     [Nodding head.]

4     **Q**     Okay.

5     **A**     Yes, ma'am, I –

6     **Q**     And it shouldn't be a problem now that Fluor has direct  
7             control?

8     **A**     I think it's going to continue to improve.

9     **Q**     Okay. All right. ORS's direct testimony raises  
10            concerns about inadequate support for cost estimates and  
11            whether vital productivity improvements and upgraded  
12            performance in other areas can be achieved. What can be  
13            done to obtain supportive documentation for that?

14    **A**     A lot of this is also included in the settlement  
15            agreement. We've asked for specific metrics on  
16            productivity to be included, for metrics on staffing to  
17            be included. So I think there's some more in there,  
18            too, but I just can't recall right off the top of my  
19            head. But we put in the settlement agreement some  
20            metrics requirements that should address this concern.

21    **Q**     What kind of metrics would that be?

22    **A**     On productivity, it's going to be a productivity report  
23            by each type of craft.

24    **Q**     Okay.

25    **A**     What they were supposed to accomplish, what they did



1        accomplish. So it'll be reporting on rod busters,  
2        welders.

3        **Q**     So more granular documentation is what you think is  
4        necessary?

5        **A**     Yes.

6                    **COMMISSIONER HALL:** Okay, thank you.

7                    Thank you, Mr. Chairman.

8                    **CHAIRMAN WHITFIELD:** Thank you, Commissioner  
9                    Hall.

10                   Commissioner Fleming.

11                   **COMMISSIONER FLEMING:** Thank you, Mr.  
12                   Chairman.

13                                    **EXAMINATION**

14        **BY COMMISSIONER FLEMING:**

15        **Q**     Based on the relationship you've observed so far with  
16        WEC and SCE&G, do you see WEC permitting SCE&G to  
17        substantially participate, to ensure satisfactory  
18        completion of the project, as you deemed essential in  
19        your testimony on page 11?

20        **A**     Yes, ma'am, I have seen improvements in that area,  
21        directly. The project management office that I alluded  
22        to is one area, but in all the meetings that we attend  
23        and that I see meeting notes of, the increased  
24        participation and the increased acceptance of that  
25        participation is evident.

1     **Q**     So when did you start – you said through the meetings,  
2                    so when did you start the meetings where you were more  
3                    concerned about their relationship? What was the  
4                    timeframe?

5     **A**     Well –

6     **Q**     Are you saying it's been just since the 1st of September  
7                    when you filed your testimony? Or before that time?

8     **A**     Oh, before that time. It's basically at the same time  
9                    that Fluor came on the job as construction manager. In  
10                  that timeframe is where the improvements have taken  
11                  place.

12    **Q**     So you have observed this since the first of the year?

13    **A**     Yes, ma'am.

14    **Q**     Okay. So this is over a longer period of time.

15    **A**     Yes, ma'am. And it's, again, evolving, and you can see  
16                  additional participation increasing, if you want to – if  
17                  you – it has gone up since the first of the year.  
18                  Started the first of the year, but it has improved since  
19                  then, also.

20    **Q**     But, apparently, you still have concerns as of the 1st  
21                  of September.

22    **A**     The only concern I have – I'm sorry.

23    **Q**     Well, as you've noted in your testimony.

24    **A**     The only concern I have is that it continue. I think  
25                  it's on the right track now. I just – I'm concerned

1            that, if conflicts arise, that there may be some  
2            backtracking. But I don't see any evidence of that.

3    **Q**    And I guess to that point, I would like to go back to a  
4            question I asked Mr. Byrne about, tying payments to the  
5            milestones, reaching the milestones. And what  
6            assurances are in place that would mean that we would  
7            not have construction shortcuts that could lead to  
8            reworks, which adds to the costs of the project?

9    **A**    Well, I think Mr. Kochems also addressed this. Once you  
10           get over 600 milestones defined and stipulated, it's  
11           pretty hard to deviate. I mean, you've got them  
12           specifically as to what they're supposed to do and how  
13           they're supposed to get paid. So you have to complete  
14           that, in order for that payment to occur, so it's  
15           difficult to deviate from that line and do something  
16           different that's not in that construction milestone.

17   **Q**    So you don't think there will be a problem with the  
18           rework, then, that they'll do it to the quality it  
19           should be?

20   **A**    Ma'am, I think that there will always be rework –

21   **Q**    Well, we've –

22   **A**    – on a nuclear project.

23   **Q**    – heard that.

24   **A**    Yes.

25   **Q**    But I was taking that into consideration.

1     **A**     I think, from what I see on the process improvements –  
2             and I think this is a very important thing. The process  
3             improvements cannot be discounted, that are being made.  
4             And as I alluded to, one is the work packages, for  
5             example. Just as a means of illustration, the work  
6             packages that they used to give to the craft under the  
7             CB&I regime were this thick [indicating], so you can  
8             imagine providing a guy in the field with a work package  
9             that looks like that. It's not a good idea. The work  
10            packages since then have been simplified, streamlined,  
11            and they're smaller than this binder now [indicating],  
12            so it's a lot more understandable to the craft as to  
13            what he has to do. Another place is in procurement.  
14            One of the reasons for low productivity on the site was  
15            that when the craft went to do the job, what they needed  
16            to do the job was not there. They didn't have the part  
17            that they were supposed to install, they didn't have the  
18            rebar, they didn't have the piece of pipe they were  
19            supposed to install. So there's a concerted effort –  
20            it's called the 30-60-90 Program. The objective is to  
21            have work packages totally complete, all the materials  
22            staged, 90 days before the work package is going to be  
23            worked in the field. And it's 30-60-90 because they've  
24            got to work up to the 90, so they're working first to  
25            get it 30 days ahead of construction, which they've

1        pretty well got now. They've got around 400 packages in  
2        backlog for construction now. They're going to get to  
3        the 60, and then they're going to get it to 90. That is  
4        the plan, and it seems to be progressing towards that.

5        **Q**    Okay. And so this is what you're talking about when we  
6        talk about the resource totally loaded integrated  
7        schedule? Or is that different issue?

8        **A**    Well, it's somewhat a different issue, ma'am. A  
9        resource-loaded schedule tells you – it identifies each  
10       task that you have to do, assigns a time duration to  
11       that task, and assigns the craft to that task, but it  
12       also takes into account – it's not just a matter of  
13       adding people, because there are also restrictions on  
14       how many people can work in an area. We just toured an  
15       area at the plant where you have to wait for somebody to  
16       pass you before you can go into the area. So some of  
17       the areas are restrictive on the number of people that  
18       can go in there. So that has to go into the resource-  
19       loaded schedule also; not only how many people, in  
20       total, you need, but how many can actually perform the  
21       work in the area that is designated.

22              So the resource-loaded schedule will tell us  
23       that: all the tasks, the time it takes to do it, the  
24       specific people it takes to do it, and whether they can  
25       be accommodated in the area they have to work.



1     **Q**     And it's my understanding that that is not completed at  
2             this point.

3     **A**     That's correct.

4     **Q**     And isn't that essential to the timing of the project,  
5             also?

6     **A**     Yes, ma'am. We consider that very important, and  
7             realize that Fluor has to take some time to do that.  
8             We've been very anxious to get that done, and we are  
9             assured that they are working diligently to do that, and  
10            we expect to see that by the end of this year. In the  
11            meantime, they're working to a more compressed schedule,  
12            in that, in specific areas, they may develop this  
13            detail, but not for the entire project.

14    **Q**     Okay. When you were talking about the 30-60-90, I  
15             thought that maybe had moved forward somewhat, too. So  
16             let me ask you a question that was asked earlier to one  
17             of the other witnesses. We want to be very positive  
18             about the project. It's a good project. I think it  
19             will be important for South Carolina. But is it also  
20             important to have backup plans if things don't move  
21             forward with WEC as planned?

22    **A**     My read on this is that I think we should have some  
23             contingencies in place. And I think, again, the new  
24             amendment, one of the important ones that is in that  
25             amendment is the – I forgot the word – stockpiling, but

1            that's not the right word, I'm sorry, of the design  
2            information that's necessary and the computer programs  
3            that are necessary in order to proceed on the job  
4            without Westinghouse. So that contingency has been  
5            identified and addressed. And Westinghouse is to  
6            provide that information to SCE&G.

7    **Q**      So you think that the process is beginning?

8    **A**      Yes, ma'am.

9    **Q**      And will continue to move forward?

10   **A**      I think so. I think, if, in fact –

11   **Q**      I'm talking about a backup plan.

12   **A**      Yes. I think it's going to be – it'll be more important  
13            if we don't see improvements. If you don't see  
14            improvements, then you probably need to expand your  
15            contingency plan.

16   **Q**      Okay. And we will – I'm sure that you will be reporting  
17            back to us –

18   **A**      Yes, ma'am.

19   **Q**      – on how that is progressing.

20   **A**      Yes, ma'am.

21                    **COMMISSIONER FLEMING:** All right. Thank you.

22                    **CHAIRMAN WHITFIELD:** Thank you, Commissioner  
23            Fleming.

24                    Commissioner Elam.

25    <

**EXAMINATION**

**BY COMMISSIONER ELAM:**

**Q**     Good afternoon. Was "escrow" the word you were looking for?

**A**     Yes, that was it. Thank you.

**Q**     I want to talk about this percentage completion that's based on man-hours. I believe it was brought up that they were at 22 percent completion. With the adding of the back shift or expanding of the back shift, and for other reasons, should we expect the rate of increase of those man-hours to increase at a faster pace?

**A**     Yes. The stated goal, currently, is to get up to 3 percent a month.

**Q**     Well, if I could, is it necessarily something that rises at a steady rate throughout the life of a project, or may there be leaps and dips as to man-hours at a particular stage of the project?

**A**     There's always a peak area of man-hours. You can think of it as a bell curve –

**Q**     Right.

**A**     – and there's always a period of peak. That period of peak is going to be 2017-2018 on this project. So, yes, you can assume there's going to be more man-hours expended and there should be, consequently, more percentage completions made.

1                    **COMMISSIONER ELAM:**    Okay.    Thank you.

2                    **CHAIRMAN WHITFIELD:**    Thank you, Commissioner  
3                    Elam.

4                    **EXAMINATION**

5                    **BY CHAIRMAN WHITFIELD:**

6                    **Q**     Mr. Jones, I have just a few questions for you.    We're  
7                    glad to have you here today.    You are, as all of our  
8                    witnesses, an important witness, and you've got a long  
9                    and impressive background in nuclear construction, and,  
10                  of course, we acknowledged your expert witness status  
11                  today.    And given all that, I want to ask you a few  
12                  questions based about this project but also using your  
13                  knowledge and expertise of years and years in this  
14                  industry.    I guess, first, I want to go a little bit  
15                  where Commissioner Fleming was.    You state in your  
16                  testimony, you said SCE&G has confidence that revised  
17                  completion dates will be met, but then you go on to say,  
18                  in your testimony, ORS does not share this confidence.  
19                  And then you cite one of the biggest reasons, one of the  
20                  things she was just asking you about, about Fluor not  
21                  coming up with the schedule, yet.    And you just now  
22                  stated that you would have it fourth quarter of 2016,  
23                  and Mr. Byrne I believe also stated anytime now.    What  
24                  is the latest you – other than between now and December  
25                  31st, what are you hearing, what are you anticipating

the exact time of when you'll have that, and what do you expect to find? You also state in your testimony that SCE&G also states that this is just a routine update. You say ORS disagrees, and you go on to call this a major, unusual event. So, I guess, when this soon-to-be-released schedule comes out, what do you anticipate, based on your expertise and your knowledge, and what's your anticipation and what are your expectations?

**A** All right. That's a multifaceted question. First –

**Q** And I'm asking you to speculate.

[Laughter]

A I have tried many times to get some read on how the Fluor schedule is going to – what it's really going to impact, and they just aren't ready yet. And so that you understand, Fluor will develop the schedule, it will then be reviewed with Westinghouse, then it will be passed to SCE&G. Now, we have agreed with them that – with SCE&G, in the past what has happened is they have done their own review of that before it was passed on to us. This time, the agreement is that they're going to give it to us at the same time they get it from Westinghouse. But there is a time. Fluor is not yet finished, Westinghouse has to do their review, then it's going to be passed to SCE&G and we should get it at that time. And right now, that is still at the end of the



1            year, probably December, before we see that.

2            We are concerned that – the current schedule is  
3            based on tasks taking a certain interval of time. We  
4            are concerned that those numbers were not accurate and  
5            that they were low, so that, when Fluor goes through  
6            their tasks, they will find that the tasks actually take  
7            longer and take more man-hours than the current schedule  
8            says. That's one of our primary concerns.

9            There are some mitigating things that we have  
10           recently learned about, that may offset some of this.  
11           For example, in the numbers reported to us now on  
12           productivity, they don't include subcontractors on the  
13           site. They're going to start doing that, but that means  
14           some portion of the work is not credited as being  
15           completed. So the 22 percent number also may be  
16           expanded somewhat by that.

17    **Q**     So you expect some gains that may not be shown on –

18    **A**     Yes, sir.

19    **Q**     – paper now?

20    **A**     Right, because at this point subcontractors were not  
21           included, but also – we're not sure where this offset is  
22           going to be. We expect that the tasks will take longer  
23           than the original estimate said, will require more man-  
24           hours, but we're not real sure how this offset occurs.  
25           So we're very anxious to get the schedule from Fluor.

1            In addition, other mitigating things that are  
2            happening is changing the sequence of how things are put  
3            in. And this can have a fairly significant impact on  
4            the approach to work. For example, one of the things  
5            done on Unit 3 is to divide one of the modules into two  
6            pieces instead of setting the whole thing. This  
7            permitted them to accelerate work associated with the  
8            auxiliary building in certain areas. So there are  
9            mitigation strategies that are also going to be employed  
10           by Fluor that may also change the sequence and how these  
11           things are done in the schedule.

12           So I do expect the time intervals associated with  
13           any – with an individual task to increase, but I'm not  
14           sure what the impact of these other mitigations are  
15           going to be. I don't – I'm not sure what's going to  
16           happen when we get the schedule, the resource-loaded  
17           schedule, from Fluor.

18    **Q**    Well, thank you for that. You've cited some positives  
19           and some negatives, potential negative unknowns, that  
20           once they are both factored in, you're saying you don't  
21           really know exactly what the balance or how those two  
22           will offset each other – I think “offset” was the word  
23           you used.

24    **A**    Yes, sir, that's correct.

25    **Q**    Without getting too much into your personal business, I

1        know you're on as a consultant with ORS. Will you still  
2        be the person – once this is released, will you still be  
3        in an ongoing relationship with ORS to still go through  
4        this information as it comes in? Are you going to  
5        continue being involved so that – you obviously are  
6        right in tune with where the project is right now, but  
7        when this report comes out, will you be the one that'll  
8        still be here kind of analyzing that?

9     **A**    Well, all I can say is I serve at the discretion of Mr.  
10        Dukes Scott.

11    **Q**    Okay, enough said.

12                                [Laughter]

13                    **CHAIRMAN WHITFIELD:** I think Commissioner  
14        Fleming has a question. And I've got one or two  
15        more, but –

16                    **COMMISSIONER FLEMING:** Well, you go ahead.

17                    **CHAIRMAN WHITFIELD:** – you go ahead and  
18        interject right now, and I'll – my two are  
19        unrelated, so go ahead.

20                                **EXAMINATION**

21     **BY COMMISSIONER FLEMING:**

22     **Q**    I just forgot one question I had intended to ask.  
23        Wanted to while I had the opportunity. The last  
24        paragraph on page 33 and 34, that last sentence, "To the  
25        extent that SCE&G guarantees the option," could you

1            explain what that means, because we've heard a lot about  
2            guarantees and maybe not guarantees.

3     **A**     Yes, ma'am.

4     **Q**     Are you saying – what does that mean? Is SCE&G agreeing  
5            to guarantee?

6     **A**     The terms of the settlement agreement do address that.  
7            And I believe, although – as Mr. Guild pointed out –  
8            the term “guarantee” is not in there, the actual  
9            definition of “guarantee” is in there, in that SCE&G has  
10          provided assurance that they will stand behind it, in  
11          the case of –

12    **Q**     SCE&G will stand behind it.

13    **A**     Yes, ma'am.

14    **Q**     Not the ratepayer.

15    **A**     Yes, ma'am.

16    **Q**     And that is your understanding.

17    **A**     Yes, ma'am. And that pertains to the scope of the EPC  
18          contract.

19                    **COMMISSIONER FLEMING:** Okay. Thank you. I'm  
20                    sorry.

21                    **CHAIRMAN WHITFIELD:** That's all right. Thank  
22                    you.

23                    **EXAMINATION**

24    **BY CHAIRMAN WHITFIELD:**

25    **Q**     I've got a couple more questions, and they are also in

1        the spirit of your years of experience in this industry.  
2        You mentioned to Commissioner Hamilton a minute ago –  
3        you were talking about the craft, and I guess the non-  
4        craft workers on the site that are working for Fluor.  
5        And you used the word “anecdotal” about them smiling and  
6        being happy with their work. And I would like to ask  
7        you, in your years of experience when you've gone on  
8        these type sites and you've seen a turnaround like that,  
9        particularly with the craft labor, has that translated  
10       into much higher productivity levels and much better  
11       improvements? Or what has been your experience in your  
12       years in the industry?

13    **A**    Yes, sir. I guess I wouldn't characterize it as “much”  
14       but, yes, it does – the kind of attitude that I'm seeing  
15       usually results in increases in productivity. The  
16       workers are more involved, they understand the processes  
17       better, and they can get through their work on a much  
18       more productive basis. So, yes, I expect that there  
19       will be some productivity increases from the changes  
20       that have been made.

21    **Q**    Well that's encouraging to hear, Mr. Jones. Next, on  
22       page 10 of your direct testimony – and I'll give you a  
23       minute to get there. I'm not necessarily looking at a  
24       direct quote, but you mentioned on page 10 that the  
25       contract for the Vogtle units is similar to that for the

1        V.C. Summer units. And without being too long, could  
2        you briefly compare and contrast the contract provisions  
3        with respect to the issues being discussed in this  
4        docket, to the extent you can? And I realize you may  
5        not be privy to all their provisions. But could you  
6        briefly summarize – compare and contrast – those  
7        provisions with ours?

8        **A**    Well, as far as the contract itself, I'm not going to be  
9        able to say a lot about it, because I don't – I know  
10       it's a fixed-price contract and I only know what's been  
11       in the popular press relative to that. So, relative to  
12       the contract, I'm not – I can't speak too much to that.  
13       But one of the things that is in place is they actually  
14       call it a four-by-one approach, and Westinghouse and  
15       Fluor are looking at the management and the procurement  
16       activities and many of the process improvements, those  
17       kind of things. They're looking to have all four units  
18       be the same. And they specifically designate it as a  
19       four-by-one concept, so four units, all working under  
20       one group of processes. So that aspect of it, I'm aware  
21       of. The details of the contract, I'm sorry, I'm not up  
22       on what those are.

23       **Q**    And I guess, lastly, in your expert opinion, with you  
24       being in this industry and the experience you have, and  
25       knowing the status of this project, where it is today,



1        what is your – and, again, I'm asking you to speculate,  
2        but what – and I know you don't have a crystal ball, but  
3        what is your prediction? How do you think this is going  
4        to unfold?

5     **A**    Well, I'll be perfectly candid. I don't think that the  
6        project is going to hit their specific completion dates.  
7        However, I believe they will be, in both cases,  
8        completed within the 18-month time limits set by the  
9        ruling by the Commission in previous hearings, the  
10       18-month window that's set there. So I think my biggest  
11       concern is Unit 3 meeting the deadline for production  
12       tax credits.

13    **Q**    Do you feel like Unit 2 is safely going to make it?

14    **A**    Yes, sir.

15    **Q**    It's Unit 3 that you're concerned with.

16    **A**    Yes, sir. That's my concern, yes. And I think the  
17       efforts to get that production tax credit extended will  
18       be very beneficial.

19                    **CHAIRMAN WHITFIELD:** Well, thank you, Mr.  
20       Jones. That's all I have.

21                    Any other Commissioner questions?

22                    [No response]

23                    If not, Mr. Nelson, do you have any redirect?

24                    **MR. NELSON:** No redirect.

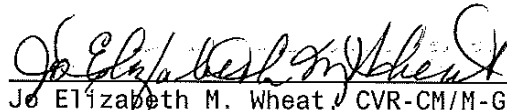
25                    **CHAIRMAN WHITFIELD:** Okay. Mr. Jones, you may

C E R T I F I C A T E

I, Jo Elizabeth M. Wheat, CVR-CM-GNSC, Notary Public in and for the State of South Carolina, do hereby certify that the foregoing is, to the best of my skill and ability, a true and correct transcript of proceedings had and testimony adduced in a hearing held in the above-captioned matter before the PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA;

That the witnesses appearing during said hearing were affirmed by me to state the truth, the whole truth, and nothing but the truth;

IN WITNESS WHEREOF, I have hereunto set my hand and seal, on this the 21<sup>st</sup> day of October, 2016.

  
Jo Elizabeth M. Wheat, CVR-CM/M-GNSC  
Hearings Reporter, PSC/SC  
My Commission Expires: January 27, 2021.